

**ENVIRONMENTAL ASSESSMENT
FOR THE
RICH MOUNTAIN ROAD PROJECT**

**TOCCOA RANGER DISTRICT
CHATTAHOOCHEE-OCONEE NATIONAL FORESTS**



May 2004

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Environmental Assessment for the Rich Mountain Road Project

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Abstract: Rich Mountain Road is located on the Chattahoochee National Forest, Toccoa Ranger District in Gilmer County, Georgia. This 9.3-mile road lies between Persimmon Gap and Brownlow Gap on the Rich Mountain Wildlife Management Area and forms the northern boundary for the Rich Mountain Wilderness Area. Maintenance activities have been very limited and as a result, the road currently is in poor condition. Portions of the road have severely eroded and are contributing sediment to adjacent streams. The road currently is used as an OHV destination for both four-wheeler ATVs and state licensed off-road vehicles; as access to the northern boundary of the Rich Mountain Wilderness Area; and as access to the interior of Rich Mountain Wildlife Management Area.

The primary purposes of this project are to provide safe and well-managed access to the area, restore damaged areas, and reduce erosion and sedimentation and improve water quality in adjacent streams. Several alternatives related to the future status and management of the Rich Mountain Road are being considered. These range from leaving the road in its current condition, to reconstructing all or a portion of the road, to permanently closing all or a portion of the road. This Environmental Assessment evaluates the effects of the various alternatives on the Physical and Biological Environment and on related Socioeconomic Factors.

May 2004

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CHAPTER 1

BACKGROUND

Rich Mountain Road is a travel route located on the Chattahoochee National Forest, Toccoa Ranger District in Gilmer County, Georgia. The location of the route, commonly known as “Old Road” or “Rich Mountain Road”, is generally described as leaving U.S. Highway 76/Georgia Highway 515 on the west end near Whitepath, passing through private land and entering National Forest land near Persimmon Gap (Figure 1). The route then follows a well-worn and well-known travel way for approximately 9.3 miles to the eastern terminus at Brownlow Gap. At this point the “Old Road” connects to Forest Service Road 338, a one-mile road built by the Forest Service that ends at the Stanley Gap County Road.

Serving as the northern boundary for the congressionally designated Rich Mountain Wilderness Area, Rich Mountain Road has a storied origin and past history. Existing prior to the acquisition of National Forest lands in the area in the late 1960s and early 1970s, the ownership and jurisdiction of the route has been questioned and debated for at least thirty years. The route’s origins are generally accepted as being constructed originally as a logging road for the removal of timber from the area by private timber companies. The route has been generally recognized as open to public access, although neither Gilmer County nor the Forest Service had records of established jurisdiction.

The 9.3 miles of road can be generally characterized as primitive, poorly designed and improperly located. Approximately half of the route is located on steep mountain slopes over 30 percent gradients, with steep gradient within the road prism. The remaining half is on ridge tops, relatively flat but lacking good off route drainage. Through the years of National Forest ownership the route has not been improved or upgraded, and maintenance has been limited and occasional at best. Maintenance has been localized to provide access to wildlife habitat improvement sites. For most of the current history of use (since the early 1970s), the route has been difficult to navigate except for off-highway type vehicles. Stream crossings of perennial streams were originally either fords or culverts. This condition has created numerous degraded segments along the route, resulting in erosion, sedimentation, creation of user located detours, and a general loss of road integrity.

Current uses of the Rich Mountain road include:

- an OHV destination for both four-wheeler ATVs and state licensed off-road vehicles
- access to the northern boundary of the Rich Mountain Wilderness Area
- access to the Rich Mountain Wildlife Management Area, cooperatively managed by the Georgia Department of Natural Resources, Wildlife Resources Division

The Atlanta office of the USDA Office of General Counsel (OGC) issued an opinion as to the road’s public jurisdiction status in May 2003. The legal opinion concluded the current route known as Rich Mountain Road is under the jurisdiction of the Forest Service and is not a state, county, or municipal road.

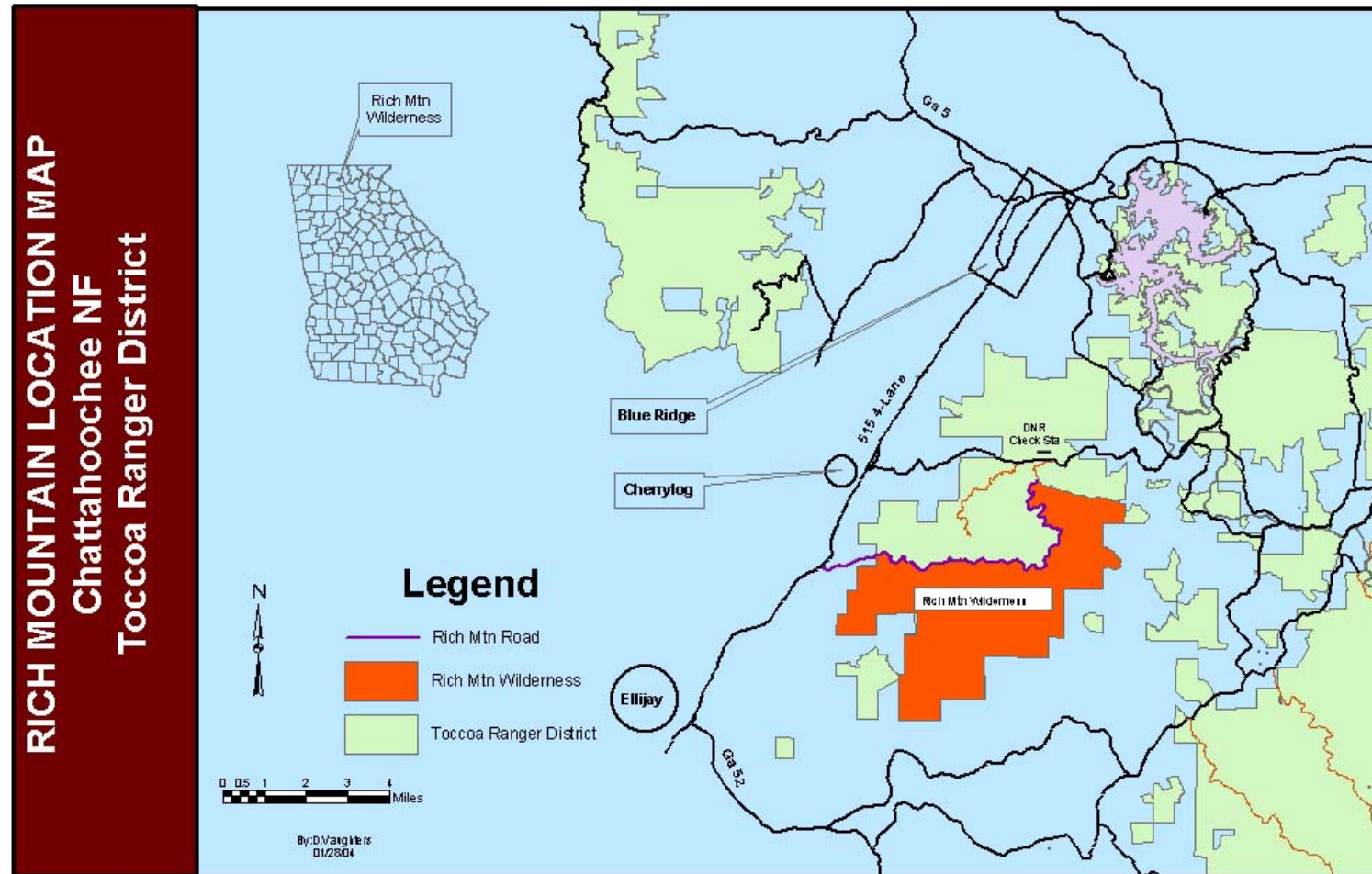


Figure 1. Location Map for the Rich Mountain Road

SUMMARY OF THE ROADS ANALYSIS

The roads analysis for the Rich Mountain Road evaluated the impacts of the road on the natural resources, public access to the Rich Mountain Wildlife Area, and the road's relationship to the forest road in the area. The analysis concluded that "road access to the upper elevations of natural area and the boundary of the wilderness area is required. Current unmanaged access cannot continue. There is too much damage to natural resources, the road prism, and cultural resources occurring with unmanaged access." (Rich Mountain Road: Road Analysis, p. 15, USDA Forest Service 2004a)

The analysis provided the following recommendations:

The assessment of the issues has created action items for the road system. The items are prioritized below.

The highest priority work on this road system is to disconnect it from the stream system. Priority management activities include the following:

- Add the Rich Mountain Road to the Forest Road System, reconstructing the road to Level 2 maintenance from at least Mile Post 3.2 to Brownlow Gap.
- Disconnect the road and stream system through
 - drain the water holes.
 - re-establish stream banks and stream channels.
 - prevent water running down the roadbed.
- Fill in the massive ruts and entrenched roadbed.
- Decommission Segment A

PURPOSE AND NEED

The purpose and need for this project is to:

1. Provide forest users with safe and well-managed access to the northern boundary of the Rich Mountain Wilderness Area and the interior of the Rich Mountain Wildlife Management Area (Forest-wide goals # 31, 32, 47).
2. Remove user-created trails, leading from the current road prism into the edge of the wilderness, that were formed when users encountered impassible conditions within sections of the road (Forest-wide goals # 35, 37).
3. Reduce erosion and sedimentation from the Rich Mountain Road (Forest-wide goals # 22, 24, 26, 48).
4. Protect known Heritage Resource sites adjacent to the Rich Mountain Road (Forest-wide goal #77).

FOREST PLAN DIRECTION

The scope and purpose of this proposal is consistent with the revised *Land and Resource Management Plan for the Chattahoochee-Oconee National Forests (January 2004)* (Forest Plan) goals. The Rich Mountain road or travel way is allocated to the 4.I Management Prescription; Natural Areas – Few Open Roads. It borders the 1.A Management Prescription to the south, Designated Wilderness, specifically the Rich Mountain Wilderness (10,343 acres).

Management Prescriptions

The emphasis of the 4.I Management Prescription - ‘Natural Areas with Few Open Roads’ includes the provision of recreation opportunities in isolated areas where users can obtain a degree of solitude and the environment can be maintained in a near-natural state. These areas are managed at an overall low management intensity level.

Standards include:

- Areas will be managed to meet or exceed Recreation Opportunity Spectrum (ROS) settings Roaded Natural (RN2) and Semi-Primitive Motorized (SPM). (4.I-006)
- Close and rehabilitate existing roads that do not contribute to the objective of preserving the natural ecosystem and are not needed for administrative purposes. (4.I-010)
- No new OHV/ATV travel routes will be constructed or designated. (4.I-012)
- Existing connecting trails to ATV and motorcycle routes would be allowed on a case-by-case basis. OHV systems are not an emphasis. (4.I-013)

In areas allocated to the 1.A Management Prescription - ‘Designated Wilderness’, ecological and biological processes are allowed to progress naturally with little to no human influence or intervention. Minimal impacts made by those who seek the wilderness as a special place offering opportunities to experience solitude and risk in as primitive surroundings as possible may occur.

Standards include:

- Recreation Opportunity Settings will be managed for Primitive ROS class, except for those areas that have Limits of Acceptable Change management direction. (1.A-017)
- The area is closed to OHV use. (1.A-020)
- Motorized access is prohibited. (1.A-024)
- Construction of roads and trails for motorized use is prohibited. Only exterior boundary roads occur. (1.A-025)

Forest-Wide Direction

Forest-wide goals apply to the entire Forest unless superseded by specific management prescription direction.

Forest-wide Goals for Access/Road Management include:

- Provide a transportation system that supplies the public, the Forest Service, and other authorized users with safe, environmentally sustainable, equitable, financially sound, and operationally effective access to roaded portions of the National Forest. (Goal 47)
- Roads do not adversely affect soil and water resources. (Goal 48)
- Resolve the jurisdiction of roads claimed by state or local government and not needed by the Forest Service, which are causing adverse environmental effects or are in conflict with management direction, and correct the problem. (Goal 50)

Forest-wide Goals for Watershed Management (Water Quality, Aquatic Habitats, and Soils) include:

- Watersheds are managed (and where needed, restored) to provide resilient and stable conditions to support the quality of water necessary to protect ecological functions and support intended beneficial uses. (Goal 22)
- Maintain or restore soil productivity and quality. (Goal 24)
- Restore and/or maintain aquatic ecosystems in amounts, arrangements, and conditions capable of supporting viable populations of all native and desired nonnative species of aquatic flora and fauna within the planning area. (Goal 26)

Forest-wide Goals for Wilderness Management include:

- Provide the primitive or semi-primitive recreational experiences that are not available on other ownerships. (Goal 35)
- Manage wilderness, roadless, and other un-roaded areas to provide the social and ecological benefits that they can offer. (Goal 37)

Forest-wide Goals for Recreational Opportunities/Experiences include:

- Provide a spectrum of high quality, nature-based recreational settings and opportunities, that reflect the unique or exceptional resources of the Forests and the interests of the recreating public on an environmentally sustainable, financially sound, and operationally effective basis. Adapt management of recreational facilities and opportunities as needed to shift limited resources to those opportunities. (Goal 31)
- Provide for the physical security of the forest visitor commensurate with the recreational setting. (Goal 32)

Forest-wide Goals for Heritage Resources include:

- Significant heritage resource values are identified, enhanced, interpreted, and protected through a systematic program of heritage resource inventory, evaluation, and preservation along with coordination with the public, scientific community, ethnic groups, and interested federally-recognized tribal governments such that heritage resource management concerns are integrated into all plans and projects (Goal 77).

These goals are further summarized in Table 7, which also compares the alternatives in terms of their ability to meet these goals.

Based on this direction, this proposal meets several goals of the revised Forest Plan, including those for watershed management, access management, recreation, wilderness management, and heritage resources. Additionally, this proposal is consistent with direction specific to Natural Areas with Few Open Roads (Management Prescription 4.I.). When implemented, this project will improve degraded conditions along the road corridor, improve water quality/aquatic habitats, and manage access effectively.

DECISION TO BE MADE

The decision to be made by the District Ranger, Toccoa Ranger District, Chattahoochee-Oconee National Forest, as the responsible official is:

- What will be the future status and maintenance level for the Rich Mountain Road?

PUBLIC INVOLVEMENT

A team of Chattahoochee-Oconee National Forest personnel conducted public involvement with the primary objective of discovering the concerns of the public. Forest Service personnel took the following steps to gather issues from the public.

- Scoping for the Rich Mountain Road began June 4, 2003. The District mailed a “scoping letter” to 89 individuals and groups known to be interested in the management of the Forest. The letter described the proposed actions to be taken on the various sections of the road and the primary purposes for those actions. The scoping comment period ended on July 4, 2003.
- Simultaneous with the mailing, the Forest issued a press release statewide to newspapers and radio stations (June 2003). Various newspapers- including *Atlanta Journal Constitution*, *North Georgia News*, *Marietta Daily Journal*, *Gwinnett Daily Post*, *The News Observer* among others- printed articles about the issue and the Forest’s request comments.
- The Forest posted a press release and a scoping letter dated June 2003, on the forest-wide website, www.fs.fed.us/conf, and also provided the public an opportunity to e-mail their comments to an identified Forest Service employee.

- 120 individuals responded during scoping and provided comments (see Appendix A, Responses to Scoping).
- A follow-up meeting was held with the County Commissioners of Gilmer and Fannin County in July 2003, providing a short presentation to inform them of the upcoming proposal and the opportunity to comment at a future date on an environmental assessment.
- In December 2003, the District sent a letter to the landowners with property in the vicinity of the west end of Rich Mountain Road. This letter described the potential watershed improvement projects on the Rich Mountain Road and the possible increase in Forest Service vehicle traffic on that road during the implementation of the project.
- The EA was made available for the 30-day notice and comment period from March 10, 2004 to April 8, 2004. A legal notice summarizing the proposed project and notifying the public of the availability of the EA for comment published in *The News Observer* (Blue Ridge, Georgia) on March 9, 2004. The EA was made available to the public on the Forest's Internet site. Copies of the EA also were mailed to those individuals that had responded by mail during the scoping period. Approximately 310 comments were received and were reviewed by the IDT. A summary of these comments is available in the project file. Where needed, comments were addressed by providing additional information and clarification in the EA.

ISSUES

Significant Issues

Issue A: Soils and Water Quality

1. Road reconstruction activities and continued use of the Rich Mountain Road may result in water quality impacts in three 6th level Hydrological Unit's:
 - a. 31501020202 Rock Creek, Little Rock Creek
 - b. 31501020204 Turniptown Creek, Briar Creek, Whitepath Creek
 - c. 60200030106 Toccoa River, Stanley Creek, Big Creek, Flat Creek.

Issue B: Recreation

1. Changes in access and condition of the Rich Mountain Road will impact recreational opportunities for OHV users.
2. Changes in access and condition of the Rich Mountain road will impact access to the northern boundary of the Rich Mountain Wilderness and southern boundary of the Rocky Mountain Natural Area.

3. Continued vehicular use of the Rich Mountain road will impact the wilderness experience in the Rich Mountain Wilderness and semi-primitive recreational experience of the Rocky Mountain Natural Area and result in increased environmental damage to these areas.

Issue C: Wildlife, Fisheries, PETS, and Locally Rare Species

1. Changes in access and condition of the Rich Mountain road will impact wildlife populations and PETS species through disturbance and poaching.
2. Road reconstruction activities and continued use of the Rich Mountain Road will impact local trout fisheries and other aquatic species.
3. Changes in access and condition of the Rich Mountain road will impact hunter access to the Rich Mountain WMA.
4. Changes in access and condition of the Rich Mountain road will affect wildlife habitat enhancement opportunities.

Issue D: Cultural/Historical Resources

1. Road reconstruction activities and continued use of the Rich Mountain Road will impact cultural resources.

Issue E: Socioeconomic Factors

1. Changes in access and condition of the Rich Mountain road will result in decreased safety due to 2-way traffic and longer drive for emergency services.
2. Changes in access and condition of the Rich Mountain road will increase illegal OHV use of the area.
3. Changes in access and condition of the Rich Mountain road will impact the local economy.

Nonsignificant Issues

Some issues were identified as nonsignificant because of one or more of the following conditions:

- The issue is outside the scope of the proposal.
- The issue is already decided by law or in the Forest Plan.
- The issue is not in conflict with the proposed action.
- The issue is not supported by scientific evidence.

- The issue is limited in duration, extent, or intensity.

Appendix B (Nonsignificant Issues) lists the nonsignificant issues identified by the ID Team and provides details of why the issues were considered nonsignificant.

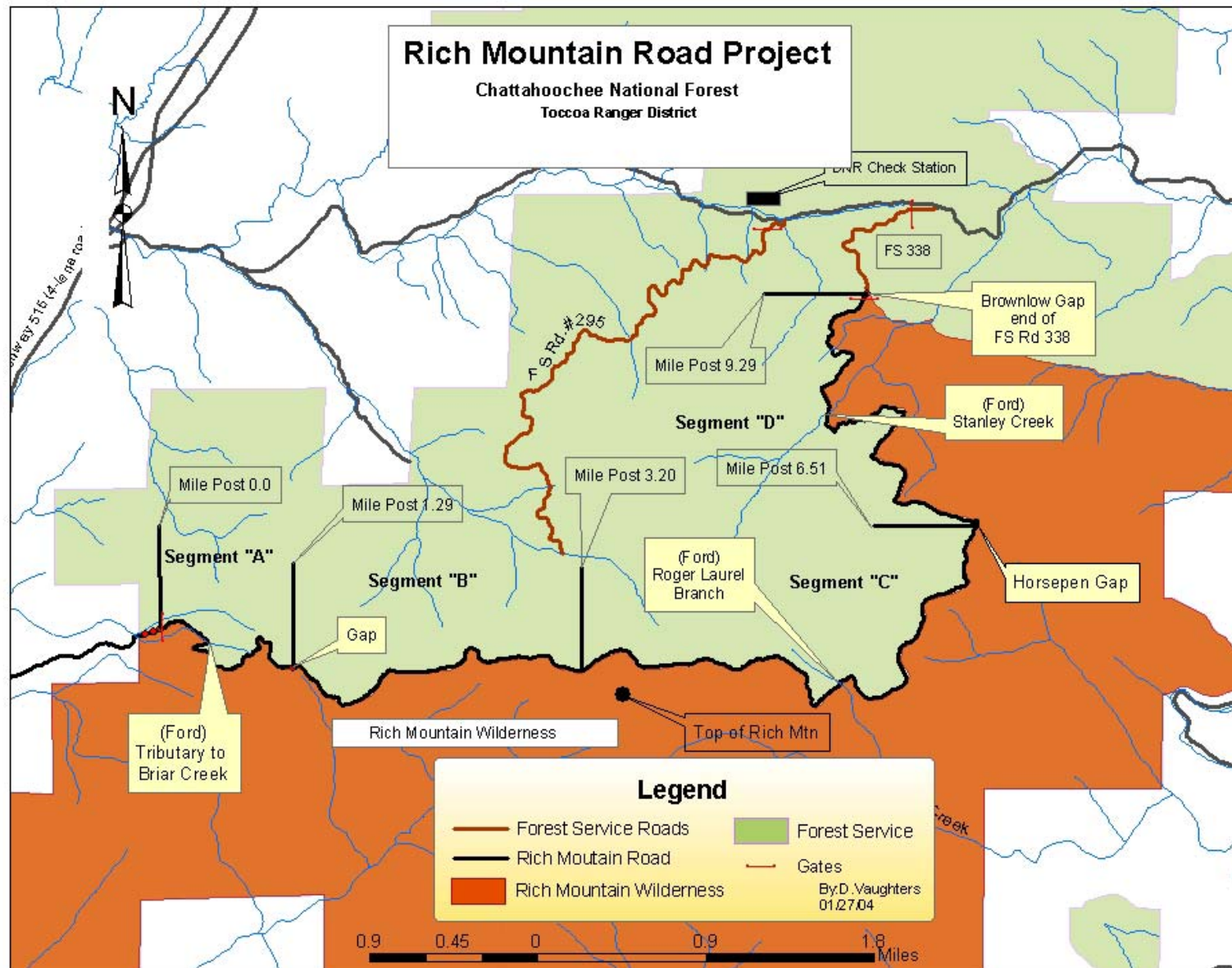


Figure 2. Rich Mountain Road.

CHAPTER 2

ALTERNATIVES

Existing Road: Overall road length is approximately 9.3 miles measured from private property boundary on western terminus (1.5 miles east of GA Highway 515) to the end of Forest Service Road 338 at the eastern terminus. Four road segments have been identified and mapped for the project (Figure 2). A description of the treatments proposed is summarized in Tables 1-4.

In Alternatives 2, 3, 4 and 5 road segments proposed for reconstruction will have wider road widths where naturally occurring turnouts already exist. Additional turnouts are not planned in the design for reconstruction. Travel speeds will be low, controlled by the overall road tread width along the open road segments.

Borrow material required for reconstruction activities described in the alternatives will be secured from appropriate material sites located off the National Forest. Material will be hauled to the required locations by truck.

Alternative 1 (No Action)

Treatments Proposed for Road: no road improvements or changes to the existing road conditions are proposed for any of the four segments of the 9.3-mile Rich Mountain Road.

Road Management Proposed: manage all four segments of Rich Mountain road as open year round from the private property boundary on western end to the terminus of FS Road 338 on the eastern end.

Recreation Access Proposed: Allow access from both ends of road by foot, mountain bicycle, horseback, and State licensed motor vehicles. Use by ATVs would not be allowed.

Issues addressed by Alternative 1: Issue B1 and B2 – Recreation. This alternative would allow continued use of the vicinity by forest visitors for recreation.

Alternative 2

Treatments Proposed for Road: All road segments (A, B, C and D) of Rich Mountain Road, totaling 9.3 miles, would be reconstructed to Road Maintenance Level 2. Proposed reconstruction would reshape the road template to improve the travel surface, drain and fill mud holes, close user-created “detours”, reconstruct cross drainage structures, reconstruct stream crossings (fords) at three major perennial streams (Table 2), stabilize crossings of twenty (20) small streams with gravel surfacing, and surface the roadway with one (1) to four (4) inches of stone of different size, depending on site conditions.

Road Management Proposed: manage all four segments of the 9.3 miles of Rich Mountain road as open year round, from the private property boundary on the western end to the end of FS Road 338 at Brownlow Gap on the eastern end.

Recreation Access Proposed: Allow year-round access from both ends of road by foot, mountain bicycle, horseback and State licensed motor vehicles. Use by ATVs would not be allowed.

Issues addressed by Alternative 2: Alternative 2 would address Issue A1, Issue B3, Issue C2 & C4, E1 & E3.

Alternative 3 (Proposed Action)

Treatments Proposed for Road: Decommission Segment A (1.3 miles) - excavate the road banks to fill existing gullies, haul in additional fill material (off-site) as needed, shape for proper drainage, re-establish a natural channel at one perennial stream crossing, and revegetate all exposed soils. Reconstruct Segments B (1.9 miles), C (3.3 miles), and D (2.8 miles) to Road Maintenance Level 2. Reconstruction would rip and reshape the road template to re-establish a 12 foot wide travel surface, drain and fill large mud holes in the road template, close user-created “detours” outside the road prism, reconstruct cross drainage structures, reconstruct stream crossings (fords) at two major perennial streams, stabilize crossings of twenty (20) small streams with gravel surfacing, revegetate all exposed soils, and surface the entire roadway with one (1) to four (4) inches of stone of different size, depending on site conditions.

Road Management Proposed: Manage Segment A as decommissioned. An existing parking area at the Forest Service property boundary will be maintained and an earthen barrier closure constructed at the intersection with the existing access road to a permanent wildlife opening. Segment A closed to vehicle access. Segments B, C and D will be open seasonally to vehicle traffic for public use with a gate at the terminus of FS Road 338 at Brownlow Gap.

Recreation Access Proposed: Segment A will be open to foot travel only. Segments B, C and D will be open to foot travel, mountain bicycle, and horseback use year-round and open seasonally to State licensed vehicle traffic. ATVs will not be allowed on any road segment.

Issues addressed by Alternative 3: Alternative 3 would address Issue A1, Issue B1, B2 & B3, Issue C1, C2, C3 & C4, Issue D1, and Issue E1, E2, and E3.

Alternative 4

Treatments Proposed for Road: Decommission Segment A (1.3 miles) - excavate the road banks to fill existing gullies, haul in additional fill material (off-site) as needed, shape for proper drainage, re-establish a natural channel at one perennial stream crossing, and revegetate all exposed soils. Segment B (1.9 miles) will be reconstructed to Road Maintenance Level 1. Reconstruction will rip and reshape the road template to improve the travel surface, drain and fill large mud holes in the roadway, close user-created

“detours”, reconstruct cross drainage structures, and surface where needed with up to four (4) inches of stone (size # 4). Segments C and D will be reconstructed to Road Maintenance Level 2 as described under Alternative 3.

Road Management Proposed: Manage Segment A as decommissioned . Segment B will be closed to vehicle use year round except for administrative use with a gate on the eastern end. Segments C and D will be open seasonally to vehicle traffic for public use with a gate at the end of FS Road 338 at Brownlow Gap.

Recreation Access Proposed: Segment A will be open to foot travel only. Segment B will be open to foot travel, mountain bicycle, and horseback use year-round. Segments C and D will be open to foot travel, mountain bicycle, and horseback use year-round and open seasonally to State licensed vehicle traffic. ATVs will not be allowed on any road segment in this Alternative.

Issues addressed by Alternative 1: Issue A1, Issue B1, B2 & B3, Issue C1, C2, C3 & C4, Issue D1, and Issue E1, E2, and E3.

Alternative 5

Treatments Proposed for Road: Segments A, B, C, and D will be reconstructed to Road Maintenance Level 1. Segment A will require ripping, excavation, filling and reshaping of the road template to re-establish a 12 foot roadbed, construction of cross drainage structures, and reconstruction of the ford identified on the un-named perennial stream. Surface with up to four (4) inches of stone (size # 4) on the entire length of Segment A to stabilize the road template, control erosion and reduce future maintenance requirements. Reconstruction of Segments B, C and D will rip and reshape the road template to re-establish a 12 foot road template, drain and fill large mud holes in the roadway, close user-created “detours”, reconstruct cross drainage structures, stabilize crossings of twenty (20) small streams with gravel surfacing, and spot surface where needed with one (1) to four (4) inches of stone of different size, depending on site conditions.

Road Management Proposed: Manage all road segments (A, B, C and D) as closed year round except for administrative use with a gate at the western terminus at the private property boundary and at the end of FS Road 338 at Brownlow Gap.

Recreation Access Proposed: Allow access from both ends of road by foot, mountain bicycle, and horseback. No motor vehicle access including State licensed motor vehicles and ATVs will be allowed.

Issues addressed by Alternative 5: Issues A1, Issue B1, B2 & B3, Issue C1, C2 and C4, Issue D, and Issue E1, E2, and E3.

Alternative 6

Treatments Proposed for Road: Decommission all existing road segments (A, B, C and D). To achieve decommissioning will require excavating the road banks in Segment A to

provide fill material to restore existing gullies. Additional material may need to be hauled from off-site to adequately fill the gullies for drainage control and provide soil material to re-establish vegetation cover. Segment B will require draining the large mud holes and filling (material hauled from off-site) to provide a natural contour for drainage. Segments C and D will require ripping the roadbed, re-shaping and restoring proper cross-drainage, restoring natural channels at major perennial stream crossings, and revegetation of all exposed soils in all segments.

Road Management Proposed: Manage all road segments (A, B, C and D) as decommissioned. Closures on the east and west end will be with earthen barriers. An existing parking site will be maintained on the west end. The eastern end will be closed at the terminus of FS Road 338.

Recreation Access Proposed: Allow access from both ends of the road by foot travel only. Future use will be determined based on access needs and the condition of the decommissioned road template. No motor vehicle access, including State licensed motor vehicles and ATVs, will be allowed.

Issues addressed by Alternative 6: Issue A1, Issue B1 & B2, Issue C2, Issue D, and Issue E2 & E3.

Table 1. Description of the Alternatives for the Rich Mountain Road.

Segment A West End to Gap	Alternative	Description of Proposed Treatments	Actions Required to Complete Proposed Treatments	Cost of Proposed Treatments
Length – 1.3 miles	Existing Conditions: steep side slope terrain, roadbed is deeply entrenched and gullied below the natural terrain surface, one major perennial stream crossing, and three small channel crossings.			
	1	No treatments proposed	None	\$0
	2	Reconstruct segment to Mtce. Level 2,	Rip roadbed, blast and remove rocks, close user created “detours” around gullied areas, haul in additional material as needed, develop a ford at one perennial stream crossing, smooth to grade for high clearance traffic, place and compact 4 inches of stone	\$63,000
	3	Decommission segment	Excavate existing road banks to provide fill material to shape for proper drainage, haul in additional material as needed, shape perennial stream crossing to a natural channel, revegetate all exposed soils, close to vehicle use	\$40,000
	4	Decommission segment	Same as described in Alternative 3	\$40,000
	5	Reconstruct segment to Mtce. Level 1, close year round	Same as described in Alternative 2	\$63,000
	6	Decommission segment	Same as described in Alternative 3	\$40,000

Table 1. continued.

Segment B Gap to Rich Mountain	Alternative	Description of Proposed Treatments	Actions Required to Complete Proposed Treatments	Cost of Proposed Treatments
Length – 1.9 miles	Existing Conditions: terrain is relatively flat, no major perennial stream crossings, one small channel crossings, little to no surfacing on roadbed, numerous user created “detours” around mud holes in roadbed			
	1	No treatments proposed	None	\$0
	2	Reconstruct segment to Mtce. Level 2, open year round	Flat terrain, large mud holes exist – hard to drain. Haul in fill material from off the segment. Add surface stone for drainage. Close user created “detours” around mud holes. No perennial stream crossing. Revegetate all exposed soils.	\$95,000
	3	Reconstruct segment to Mtce. Level 2, seasonally closed	Same as described in Alternative 2, except managed as seasonally closed.	\$88, 000
	4	Reconstruct segment to Mtce. Level 1, install gate barrier @ Rich Mtn, closed, admin use only	Same as described in Alternative 2, except spot surfacing only for lower maintenance level and managed as closed except for administrative use only.	\$62,000
	5	Reconstruct segment to Mtce. Level 1, close year round	Same as described in Alternative 4, except no gate installed at Rich Mtn.	\$62,000
	6	Decommission segment	Rip roadbed, drain mud holes, reshape for proper drainage, revegetate all exposed soils. Restrict use by vehicles	\$38,000

Table 1. continued.

Segment C Rich Mountain to Horsepen Mountain	Alternative	Description of Proposed Treatments	Actions Required to Complete Proposed Treatments	Cost of Proposed Treatments
Length – 3.3 miles	Existing Conditions: Steep side slope terrain, native rock surface, one major perennial stream crossing, ten small channel crossings, large boulders in roadbed, gullies, roadbed has worn down to bedrock in several locations			
	1	No treatments proposed	None	\$0
	2	Reconstruct segment to Mtce. Level 2, open year round	Steep terrain. Roadbed will require ripping, reconstruct drainage dips, stream crossings will require reshaping for fords, smooth roadbed for high clearance traffic, spread 4 inches of stone and compact. Revegetate all exposed soils.	\$119,400
	3	Reconstruct segment to Mtce. Level 2, seasonally closed	Same as described in Alternative 2, except managed as seasonally closed.	\$119,400
	4	Reconstruct segment to Mtce. Level 2, seasonally closed	Same as described in Alternative 2, except managed as seasonally closed.	\$119,400
	5	Reconstruct segment to Mtce Level 1, close year round	Same as described in Alternative 4, except spot surfacing, manage as closed.	\$65,000
	6	Decommission segment	Rip roadbed, drain mud holes, reshape for proper drainage, and revegetate all exposed soils. Restrict use by vehicles	\$52,000

Table 1. continued.

<u>Segment D</u> Horsepen Mountain to East End	Alternative	Description of Proposed Treatments	Actions Required to Complete Proposed Treatments	Cost of Proposed Treatments
Length – 2.8 miles	Existing Conditions: terrain is steep side slope, roadbed is entrenched and gullied into natural terrain, one major perennial stream crossings and thirteen small channel stream crossings			
	1	No treatments proposed	None	\$0
	2	Reconstruct segment to Mtce. Level 2, open year round	Steep terrain. Roadbed will require ripping, reconstruct drainage dips, stream crossings will require reshaping for fords, smooth roadbed for high clearance traffic, spread 4 inches of stone and compact. Revegetate all exposed soils.	\$102,600
	3	Reconstruct segment to Mtce. Level 2, seasonally closed	Same as described in Alternative 2, except managed as seasonally closed. Install gate at Brownlow Gap, end of FS Road 338	\$102, 600
	4	Reconstruct segment to Mtce. Level 2, seasonally closed	Same as described in Alternative 3.	\$102,600
	5	Reconstruct segment to Mtce. Level 1, close year round	Same as described in Alternative 3, except manage as closed year round except for administrative use.	\$60,000
	6	Decommission segment	Excavate existing road banks to provide fill material to shape for proper drainage, shape perennial stream crossing to a natural channel, revegetate all exposed soils, close to vehicle use.	\$50,000

Table 2. -Proposed Treatment at Major Perennial Streams for Rich Mountain Road

Name of Streams	Location by Road Segment	Existing Crossing Description	Proposed Treatment
Un-named branch, tributary to Briar Creek Drains to northwest	Segment A	Channel width: 3-4 ft. Approaches are relative flat and rocky, with the streambed rocky. This ford appears to be in the original location.	Reshape to a near natural contour, install geo-web material and fill with appropriate size rock. Surface approaches on both sides with 4 inches of #4 stone. Cost Estimate: \$8000.00 Alternatives 2 and 5 only
Roger Laurel Branch Drains to southeast	Segment C	Channel width: 3-4 ft. Approaches are relative flat and rocky, with the streambed rocky. This ford appears to be in the original location.	Reshape to a near natural contour, install geo-web material and fill with appropriate size rock. Surface approaches on both sides with 4 inches of #4 stone. Cost Estimate: \$8000.00 Alternatives 2, 3, 4, and 5 only
Stanley Creek Drains to northeast	Segment D	Channel width: 4-5 ft. Approaches are steep on both ends. Users have bypassed the old, unusable bridge with detour. Detour is about 150 feet long, on the south side toward the Wilderness, and is approximately 25 feet from center of roadbed.	Reconstruct existing ford. Design ford to handle loaded gravel truck. Install geo-web material and fill with appropriate size rock. Surface approaches on both sides with 4 inches of #4 stone. Cost estimate - \$18,000 Alternative 2, 3, 4, and 5 only

Fords: Most fords will need to be excavated and reshaped to a near natural contour, install geo-web material and fill with appropriate size rock. Surface approaches with #4 stone.

Revegetation: All disturbed soils in all segments will be fertilized, seeded and mulched to establish a permanent ground cover. Silt fence, hay bales and other erosion control measures will be installed prior to construction and maintained through project completion.

Surfacing: Treatment of segments requiring gravel surfacing will have 4 inches of size #4 stone spread and compacted as specified.

Note: Approximately 20 crossings of small channel streams or spring outlet flows will be stabilized along the road segments by surfacing with gravel. Gravel will be placed on the approaches to the channel and through the channel.

Table 3. Road Maintenance Levels for Each Road Segment by Alternative.

ALTERNATIVE	SEGMENT A	SEGMENT B	SEGMENT C	SEGMENT D
1	No Action	No Action	No Action	No Action
2	LEVEL 2	LEVEL 2	LEVEL 2	LEVEL 2
3	OBLITERATE	LEVEL 2	LEVEL 2	LEVEL 2
4	OBLITERATE	LEVEL 1	LEVEL 2	LEVEL 2
5	LEVEL 1	LEVEL 1	LEVEL 1	LEVEL 1
6	OBLITERATE	OBLITERATE	OBLITERATE	OBLITERATE

¹ See Glossary for definitions of Road Maintenance Levels

Table 4. Road Status for Each Road Segment by Alternative

ALTERNATIVE	SEGMENT A	SEGMENT B	SEGMENT C	SEGMENT D
1	Open year-round	Open year-round	Open year-round	Open year-round
2	Open year-round	Open year-round	Open year-round	Open year-round
3	Permanent Closure	Open Seasonally	Open Seasonally	Open Seasonally
4	Permanent Closure	Closed-Admin Use only	Open Seasonally	Open Seasonally
5	Closed-Admin Use only	Closed-Admin Use only	Closed-Admin Use only	Closed-Admin Use only
6	Permanent Closure	Permanent Closure	Permanent Closure	Permanent Closure

MITIGATION AND MONITORING MEASURES COMMON TO ACTION ALTERNATIVES

The following mitigation measures would reduce possible adverse effects from the proposed activities:

1. Rich Mountain Wilderness and Wildlife Management Area have been posted with signs that clearly show the public where they can legally ride motorized vehicles.
2. Signs will be posted to clearly identify the boundary of the Rich Mountain Wilderness.
3. Established roads or routes will be monitored to determine further encroachment by illegal motorized use and corrective actions will be taken as needed.
4. During reconstruction, warning and safety messages will be posted for forest visitors to the area.
5. The known locations the Locally Rare plant species starflower (*Trientalis borealis*) and horse gentian (*Triosteum aurantiacum*) will be protected from disturbance.
6. The known Heritage Resources sites will be protected from disturbance.
7. Appropriate erosion control measures will be used to minimize potential impacts from the proposed activities. Examples may include the use of silt fences, hay bales, brush barriers, and prompt revegetation of exposed soils. Georgia's Best Management Practices for Forestry (1999), the Manual for Erosion and Sediment Control in Georgia, Fifth Edition, 2000, and Forest Service engineering technical handbooks are sources for design specifications for erosion and sediment control measures.
8. Mitigation measures for the protection of soil and water, recreation, wildlife, and vegetation include directions and standards found in the Land Resource Management Plan for the Chattahoochee-Oconee National Forest, January 2004.
9. Riparian Corridors are designated on all perennial and intermittent streams in the vicinity as directed by Management Prescription 11 in the Forest Plan. The designation of these corridors identifies an area that will provide protection of streams and aquatic habitat.
10. Management of seasonal use periods of Rich Mountain Road will provide controls of potential damage to the road surface and adjacent slopes, but also provide vehicle access during hunting seasons or other designated periods of use.

11. Forest Supervisor Closure Orders will be developed to establish the seasonal and/or permanent closure status of individual road segments. Information will be provided to the public to make them aware of the current road status.
12. Law Enforcement presence on the area will be maintained to ensure compliance with the established closure orders.

Monitoring - Monitoring of implementation will involve contract inspections by certified contracting officer representatives to assure that the specified mitigation measures, best management practices, and contract specifications are appropriately utilized. Field reviews will be conducted by District and Forest-level staff to ensure that the appropriate standards and mitigation measures are implemented and that these measures are effective in protecting soil productivity, water quality, and other resources as they were designed to do. These practices also will be monitored after completion of the project to determine any maintenance needs. Specific water quality monitoring will be conducted to measure the effectiveness of the road reconstruction activities and mitigation measures. Baseline sampling of habitat conditions and aquatic invertebrate populations has already been conducted on selected stream segments.

COMPARISON OF THE ALTERNATIVES (THE PROPOSED ACTION AND THE ALTERNATIVES)

Tables 5 lists the Recreational Access permitted for each road segment by alternative. Road maintenance costs are displayed in Table 6 for the six alternatives. These cost estimates are for periodic maintenance activities that would be implemented on the various road segments as needed, including reshaping drainage dips, spot gravel and brush clearing along the road edge. These estimates are based on the road maintenance level proposed for the individual segments, either maintenance level 1 or 2. The seasonal use schedule will aid in reducing maintenance costs for the road segments. The alternatives vary in the recreational access permitted, and both initial and annual maintenance costs. The effects of these differences are disclosed in Chapter 3 of the EA. Table 7 provides a comparison of the Alternatives in terms of their ability to meet Forest Plan Goals.

Table 5. Recreational Access Permitted for Each Road Segment by Alternative

ALTERNATIVE	SEGMENT A	SEGMENT B	SEGMENT C	SEGMENT D
1	State-licensed motorized vehicles, Horses, Mtn Bikes, Foot-travel	State-licensed motorized vehicles, Horses, Mtn Bikes, Foot-travel	State-licensed motorized vehicles, Horses, Mtn Bikes, Foot-travel	State-licensed motorized vehicles, Horses, Mtn Bikes, Foot-travel
2	State-licensed motorized vehicles, Horses, Mtn Bikes, Foot-travel	State-licensed motorized vehicles, Horses, Mtn Bikes, Foot-travel	State-licensed motorized vehicles, Horses, Mtn Bikes, Foot-travel	State-licensed motorized vehicles, Horses, Mtn Bikes, Foot-travel
3	Foot-travel only	State-licensed motorized vehicles (seasonal), Horses, Mtn Bikes, Foot-travel	State-licensed motorized vehicles (seasonal), Horses, Mtn Bikes, Foot-travel	State-licensed motorized vehicles (seasonal), Horses, Mtn Bikes, Foot-travel
4	Foot-travel only	Horses, Mtn Bikes, Foot-travel	State-licensed motorized vehicles (seasonal), Horses, Mtn Bikes, Foot-travel	State-licensed motorized vehicles (seasonal), Horses, Mtn Bikes, Foot-travel
5	Horses, Mtn Bikes, Foot-travel	Horses, Mtn Bikes, Foot-travel	Horses, Mtn Bikes, Foot-travel	Horses, Mtn Bikes, Foot-travel
6	Foot-travel only	Foot-travel only	Foot-travel only	Foot-travel only

Table 6. Treatment Costs for Each Road Segment and Annual Maintenance Costs by Alternative

ALTERNATIVE	TREATMENT COSTS					MAINTENANCE COSTS
	SEGMENT A	SEGMENT B	SEGMENT C	SEGMENT D	TOTAL	
1	\$0	\$0	\$0	\$0	\$0	\$0
2	\$63,000	\$95,000	\$119,400	\$102,600	\$380,000	\$3,600
3	\$40,000	\$88,000	\$119,400	\$102,600	\$350,000	\$3,000
4	\$40,000	\$62,000	\$119,400	\$102,600	\$324,000	\$1,900
5	\$63,000	\$62,000	\$65,000	\$60,000	\$250,000	\$1,000
6	\$40,000	\$38,000	\$52,000	\$50,000	\$180,000	\$0

Table 7. Comparison of Alternatives in terms of their ability to meet Forest-wide Goals.

Goal No.	Forest-wide Goal	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6
	Watershed Management						
22	Watersheds are managed (and where needed, restored) to provide resilient and stable conditions to support the quality of water necessary to protect ecological functions and support intended beneficial uses.	DM	PM	M	M	M	M
24	Maintain or restore soil productivity and quality	DM	PM	M	M	M	M
26	Restore and/or maintain aquatic ecosystems in amounts, arrangements, and conditions capable of supporting viable populations of all native and desired nonnative species of aquatic flora and fauna within the planning area	DM	PM	M	M	M	M
	Recreational Opportunities/Experiences						
31	Provide a spectrum of high quality, nature-based recreational settings and opportunities, that reflect the unique or exceptional resources of the Forests and the interests of the recreating public on an environmentally sustainable, financially sound, and operationally effective basis. Adapt management of recreational facilities and opportunities as needed to shift limited resources to those opportunities.	PM	PM	M	M	PM	PM
32	Provide for the physical security of the forest visitor commensurate with the recreational setting	PM	PM	M	M	M	PM
	Wilderness Management/Roadless Areas						
35	Provide the primitive or semi-primitive recreational experiences that are not available on other ownerships	PM	PM	M	M	M	M
37	Manage wilderness, roadless, and other un-roaded areas to provide the social and ecological benefits that they can offer.	PM	PM	M	M	M	M
	Access/Road Management						
47	Provide a transportation system that supplies the public, the Forest Service, and other authorized users with safe, environmentally sustainable, equitable, financially sound, and operationally effective access to roaded portions of the National Forest.	DM	PM	M	M	DM	DM
48	Roads do not adversely affect soil and water resources.	DM	PM	M	M	M	M
50	Resolve the jurisdiction of roads claimed by state or local government and	M	M	M	M	M	M

	not needed by the Forest Service, which are causing adverse environmental effects or are in conflict with management direction, and correct the problem.						
	Heritage Resources						
77	Significant heritage resource values are identified, enhanced, interpreted, and protected through a systematic program of heritage resource inventory, evaluation, and preservation along with coordination with the public, scientific community, ethnic groups, and interested federally-recognized tribal governments such that heritage resource management concerns are integrated into all plans and projects.	DM	DM	PM	M	M	M

M=Meets Goal

PM= Partially Meets Goal

DM=Does not Meet Goal

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

An alternative was considered to reconstruct the road for OHV users and to charge a user fee. The road would be left relatively unimproved with minimal maintenance to retain the difficulty and allure to OHV users. This was not considered in detail due to the fact that OHV use on this road would not be in compliance with the Forest Plan or be ecological sound for the soil and water resources. The road lies within Management Prescription 4.I (Natural Area – Few Open roads) which prohibits the construction or designation of any new OHV/ATV travel routes. Allowing this road to be an OHV trail system also is not within the purpose and need of the decision to be made. The purpose and need is to reduce erosion and sedimentation and to improve water quality, while providing forest users with safe and well-managed access into these areas.

CHAPTER 3

ENVIRONMENTAL CONSEQUENCES

PHYSICAL ENVIRONMENT

Soil

“Rich Mountain Road” traverses upper side slope and ridge top topographic positions typical of the Southern Blue Ridge Mountains in Georgia. Ecologically, the Road is located within the Rich Mountain Landtype Association (M221Dc16), the Southern Blue Ridge Mountains Subsection (M221Dc) and the Blue Ridge Mountains Section (M221D). Elevations along the route range from low points of about 2400 feet at the ends (FS Road 338 on the east and Persimmon Gap on the west) to approximately 3700 feet in the gap east of Rich Mountain. Most of the route is located at elevations above 3000 feet. Mountain crests along the route rise to well over 3000 feet with Aaron Mountain (3360), Rich Mountain (4040), Little Bald Mountain (3960), Big Bald Mountain (4081) and Horsepen Mountain (3575) being the notable higher elevations. Average annual precipitation of the Rich Mountain Landtype Association is 63 inches, with driest periods being in the fall and wetter periods in late winter to early spring. Average annual temperature is about 60°F, based on temperatures at Ellijay to the southwest. Growing season is about 205 frost-free days. Vegetation along the route is generally oak-pine at lower elevations and oak-hickory at elevations above 2500 feet.

Soil mapping units identified by road segment on Rich Mountain Road are listed in Table 8 below:

Table 8. Soil Mapping Units by Road Segment.

Rich Mountain Road Segment	Soil Mapping Units by Road Segment
Segment A	AEF
Segment B	AEF, TIE, TmE
Segment C	AcG, AEE, AEF, TIE, TmE
Segment D	AEF, AjC, TmE

BRIEF DESCRIPTIONS OF SOIL MAPPING UNITS

Each of the soil-mapping units found along the Road is described in the Cherokee-Gilmer-Pickens Counties Soil Survey, mapped at a scale of 1:20,000 or one map inch equals approximately 1666 feet on the ground. The soil maps were created on an aerial photo base to provide a photographic background. Mapping is considered suitable for broad scale planning and investigation; however, a greater level of detail is required for project scale design. The following descriptions of the soil-mapping units are excerpted from the CGP Soil Survey.

AcG – Ashe stony loam, 60 to 80 percent slopes. This soil occurs on mountains and escarpments at about the highest elevations in the survey area. The surface layer is dark-brown loam. The subsoil is strong brown or dark yellowish-brown loam about 15 inches thick. The surface layer and the subsoil contain stones and cobbles. Included in the mapping are areas of a similar soil in which the combined thickness of the surface layer and the subsoil is about 12 inches. Also included are rock outcrops.

AEE – Ashe and Edneyville stony loams, 10 to 25 percent slopes. These soils occur on ridges and saddles of the higher mountains. The profiles of the two soils are similar to those described as representative for their respective series. The texture of the surface layer ranges from loam through sandy loam. Included in the mapping are small areas of Porters soils and areas of similar soils that have a black surface layer high in organic-matter content.

AEF – Ashe and Edneyville stony loams, 25 to 60 percent slopes. These soils occur in fairly large areas on narrow ridge tops and on long irregular, mountainous side slopes. Their profiles are those described as representative for the respective series. The surface layer is stony loam to sandy loam. Included in the mapping are areas of a similar soil that has a black surface layer high in organic matter content.

AjC – Alluvial land, cobbly. This soil formed in well drained and somewhat poorly drained alluvial and colluvial material on stream flood plains. It is gravelly and cobbly and varies from place to place, but is mainly brown or dark-grayish brown, coarse-textured loam, and silt loam. In places at a depth of 10 to 24 inches, it is about 90 percent pebbles or cobblestones. One mapped occurrence of this unit within the project area is along the floodplain of Stanley Creek.

TIE – Tusquitee loam, 10 to 25 percent slopes. This soil formed in colluvial deposits on benches and at the base of long hillsides. It has the profile described as representative of the series. Included in mapping are small areas of soils steeper than 25 percent and small areas of Porters, Edneyville, and Talladega soils.

TmE – Tusquitee stony loam, 10 to 25 percent slopes. This soil formed in colluvial deposits on foothills and at the base of slopes. The surface layer is dark-brown loam that contains stones, gravel, and a few cobblestones. The subsoil is yellowish-brown and strong-brown loam or clay loam. Large stones make up about 25 to 40 percent of the surface layer and the subsoil. Included in mapping are small areas of soils steeper than 25 percent and small areas of Porters, Edneyville, and Talladega soils.

Element: Compaction

Compaction is the lowering of the air space in the soil by the passage of heavy weight, e.g. OHV vehicles, which packs more soil particles into the same amount of space. Air and water holding capacity is reduced, typically resulting in loss of vegetation growth. Increased compaction results in lowered ability of the soil to absorb rainfall, causing an

increase in surface runoff. Surface runoff then moves soil through erosion, with the potential to become sediment if it reaches streams. Soil compaction can be mitigated by locating access routes outside of streamside areas and by suspending use during periods of high rainfall. Mitigations include locating travel routes on well-drained soils and keeping tread widths to a minimum to reduce area extent of compaction to the area within the immediate tread.

Measure - Estimated acres compacted by disturbance from vehicle access

Bounds for analysis-

Spatial: the current road template, and areas directly adjacent to the road created by users to avoid rocks, ruts, mud-holes or other hazards.

Temporal: the current condition through the next 10 years.

Existing Conditions

In general the soils along the route can be characterized as steep, stony and loamy-textured with depths to hard bedrock ranging from shallow (less than 20 inches) to deep (more than 60 inches). Acres disturbed by the existing road template and the adjacent user created “detours” range from 18 to 24 acres (average 2.4 acres per mile). These acres are those most subject to compaction and the adverse effects associated. Of this acreage the soils most compacted are those with repeated passes by vehicles over the same route, typically within the roadbed or the user-created detours. Without treatment or restoration most of the compacted soils cannot sustain normal vegetation growth adequate to provide soil cover, and are then subject to erosion.

Effects of Alternative 1 (No Action)

Direct Effects - Existing conditions will continue on the acres disturbed, both within the road template and the user-created detours as they continue to widen as users avoid barriers or obstacles along the route. Compacted soils will result from this use with continued loss of vegetation cover, rutting of soils and expansion of the area disturbed by the road. Acres disturbed will increase from the 18 to 24 described in existing condition with continued vehicle activity along the road template.

Indirect Effect - Soil air and water holding capacity is reduced, typically resulting in loss of vegetation growth. Increased compaction results in lowered ability of the soil to absorb rainfall, causing an increase in surface runoff. Surface runoff then moves soil through erosion, with the potential to become sediment if it reaches streams.

Cumulative Effects - Soil productivity will decline as compaction continues indefinitely, with a continued loss of the ability to support vegetation cover along the road template area.

Effects of Alternative 2

Direct Effects - Compaction will be reduced with reconstruction treatments within the road template. Restoration of the disturbed soils outside the designated road template will reduce the effects of compaction and begin to restore vegetation cover. Acres disturbed will decline by 5 to 7 acres with restoration of impacted soils outside the road template, and reconstruction of the road template, adding surfacing and proper drainage. Continued vehicle use will require maintenance to keep the reduction in compacted soils within tolerable levels.

Indirect Effects - Reduction of compaction will result in vegetation becoming re-established, restoring soil productivity. Surface runoff is reduced, through an overall reduction in the width of compacted areas.

Cumulative Effects - Soil productivity will recover for areas outside the designated travel way as the road is reconstructed and managed with an appropriate width. Additional treatments outside the vicinity are not proposed that would add to the effects along the travel route.

Effects of Alternative 3 (Proposed Action)

Direct Effects - Compaction will continue within the road template for segments B, C, and D, but reconstruction of the road template will restrict compaction effects to the roadbed. Vegetation restoration will eliminate compaction outside the designated travel way in these segments. Compaction will be eliminated for Segment A with decommissioning treatments. Acres disturbed will decline as soils become revegetated, and be reduced by at least 3 to 5 acres by decommissioning Segment A on the west end of the road, and an additional 4 to 6 acres along Segments B, C and D.

Indirect Effects - Indirect effects are eliminated for segment A. In this segment, vegetation is reestablished for the entire road prism, normal water infiltration and runoff processes are restored. Reduction of compaction will result in vegetation becoming re-established, restoring soil productivity. Surface runoff is reduced, through an overall reduction in the width of compacted areas. Surface runoff from the travel way or road prism is reduced with surfacing and installation of proper drainage controls. In segments B, C, and D, vegetation is reestablished beyond the travel way and in areas widened through undesignated use.

Cumulative Effects - Soil productivity will recover for areas outside the designated travel way as the road is reconstructed and managed with an appropriate width. No additional ground disturbing actions are proposed in the vicinity.

Effects of Alternative 4

Direct Effects - Compaction due to regular travel on the road will continue for segments C, and D, but reconstruction and surfacing will eliminate compaction outside the

designated travel way in these segments. In segment B, the road will only be used for administrative purposes, allowing the soils to start to recover. Over time, vegetation would reestablish and the road would have a native surface. Compaction will be eliminated for segment A. Acres disturbed will decline as identified in Alternative 3.

Indirect Effects - Indirect effects are eliminated for segment A. In this segment, vegetation is reestablished for the entire road prism, normal water infiltration and runoff processes are restored. Increased surface runoff from the travel way or road prism is eliminated. In segments B, C, and D, vegetation is reestablished beyond the travel way and in areas widened through undesignated use. Surface runoff is reduced, through an overall reduction in width of compacted areas in these segments.

Cumulative Effects - Soil productivity will recover for areas outside the designated travel way as the road is reconstructed and managed with an appropriate width. No additional ground disturbing actions are proposed in the vicinity.

Effects of Alternative 5

Direct Effects - Compaction from vehicle travel will be reduced because all segments would be closed and administrative use traffic only would be allowed as needed. Over time, vegetation would reestablish and the road would have a stable surface. Acres disturbed will decline as identified in Alternative 3.

Indirect Effects - Indirect effects are eliminated for segment A. In this segment, vegetation is reestablished for the entire road prism, normal water infiltration and runoff processes are restored. Increased surface runoff from the travel way or road prism is eliminated.

In segments B, C, and D vegetation is reestablished beyond the travel way and in areas widened through undesignated use. Surface runoff is reduced, through an overall reduction in width of compacted areas in these segments.

Cumulative Effects - Soil productivity will recover for areas outside the designated travel way as the road is reconstructed and managed with an appropriate width.

Effects of Alternative 6

Direct Effects - Compaction would be eliminated when the entire road is decommissioned. Acres disturbed will be reduced from the range identified in the described existing condition to near natural levels as the estimated 18 to 24 of the road template are reshaped for proper drainage, vegetation is restored and vehicle access is prohibited.

Indirect Effects - Increased surface runoff from compacted soils would be eliminated with the restoration of vegetation cover and installation of proper drainage.

Cumulative Effects - Soil productivity will recover over time as vegetation is established on all existing bare or compacted soils.

Element: Soil Erosion

Soil erosion begins with the direct effect of soil exposure as a result of some activity. Mineral soil is exposed when the organic root mat and duff layer are removed from the natural soil profile. Soil particles then become loosened by the energy of falling rain and carried as sediment by surface runoff. Of greatest concern are long, unbroken grades on trails and roads. Continued erosion results in loss of soil productivity, loss of traffic tread, and increased costs to maintain roads or trails. Existing actions that expose mineral soil to erosion include: (1) vehicle use of roads, trails and stream crossings, (2) clearing for camp areas, (3) construction of diversion ditches and surface reshaping during maintenance activities. Soil erosion can be mitigated by locating trails and trailheads on grades less than 10%, maintain ground cover (vegetation or other material), providing adequate drainage on trails, and minimizing use during wet seasons.

Measure - Estimated acres of soil disturbed by storm water flow

Bounds for analysis -

Spatial: the current road, and areas of bare soil directly adjacent to the road that users have created to avoid rocks, ruts, mud-holes or other hazards.

Temporal: the current condition through the next 10 years.

Existing Condition

The existing route of Rich Mountain Road was located and constructed with minimal design or attention to physical features such as soils, geology, streams or terrain. Construction and subsequent maintenance has included few, if any, erosion and sediment control features. A number of existing segments occur on adverse gradients, lack desirable road prism features, and have no cross drainage to reduce improper overland flow. The lack of attention to design standards, and proper construction and maintenance has resulted in a roadway with segments currently causing active erosion of the soils along the route, and contributing sediment to streams that cross the area. Most of Road Segment A from the West End is located on terrain that has created a road in a gully with the road prism occurring below the natural ground surface. Similar conditions are noted along Segment D. Lack of drainage controls and non-existent routine maintenance through the years has resulted in road segments that cannot meet current road design and maintenance standards. The converse situation occurs along portions of Road Segment B that traverses relatively flat terrain on the ridges of Rich Mountain. Here the road prism lacks drainage away from “mud holes” or depressions in the landscape, causing road users to create new routes to avoid the ponded water.

Acres disturbed by the existing road template and the adjacent user created “detours” range from 18 to 24 acres (average 2.4 acres per mile), including the road. The road segments have little to no gravel surfacing allowing erosion to occur during storm events.

Segments A and D have endured erosion actions sufficient to create gullies and destroy normal road templates. Drainage in these segments is difficult to control, generally passing directly along the road center until a run-off point is reached. Segments B and C have lesser erosion risk due to the lower slope gradient and landform position, generally ridgetops and upper sideslopes.

Effects of Alternative 1 (No Action)

Direct Effects - Existing conditions and adverse effects within the travel way and adjacent areas will continue. Erosion will continue at levels described for existing condition over 18 to 24 acres, and could increase over time as users continue to create disturbed areas adjacent to the current travel way. All segments continue to erode and contribute to the total estimated amount of disturbance.

Indirect Effect - Indirect effects include the delivery of eroded soil to stream channels and degraded aquatic habitats.

Cumulative Effects - No additional actions are proposed within the analysis area that would add to the erosion occurring within the disturbed acres of the road template.

Effects of Alternative 2

Direct Effects - Acres disturbed will be reduced by 5 to 7 acres below existing conditions with reconstruction of the road template and restoration of vegetation cover outside the template. Short-term erosion will continue during the reconstruction period and for 6 months to 1 year after completion until an adequate cover is attained. Cover will result from the addition of surfacing on the road template and re-establishment of vegetation cover on the adjacent cut and fill slopes. Restoration of the existing stream crossings to a natural condition will also restore aquatic habitats in the streams below the road template.

Indirect Effects - Reconstruction of the road template and revegetation of adjacent disturbed soils will slow erosion and result in reduced soil runoff to stream systems in the vicinity. This alternative will continue to allow vehicle access along the road template resulting in the potential for continued erosion unless road maintenance is applied on a regular basis.

Cumulative Effects - No additional actions are proposed within the analysis area that would add to the erosion occurring within the disturbed acres of the road template.

Effects of Alternative 3 (Proposed Action)

Direct Effects - Acres disturbed will be reduced by 5 to 7 acres below existing conditions with reconstruction of the road template and restoration of vegetation cover outside the template. Short-term erosion will continue during the reconstruction period and for 6 months to 1 year after completion until an adequate cover is attained. Cover will result from the addition of surfacing on the road template and re-establishment of vegetation

cover on the adjacent cut and fill slopes. Restoration of the existing stream crossings to a natural condition will also restore aquatic habitats in the streams below the road template. An additional reduction in acres disturbed will occur with the decommission of Segment A, restoring an area of 3 to 4 acres to a condition with drainage control and vegetation cover that will result in declines in erosion.

Indirect Effects - Reconstruction of the road template and revegetation of adjacent disturbed soils will slow erosion and result in reduced soil runoff to stream systems in the vicinity. This alternative will continue to allow vehicle access along the road template in Segments B, C and D resulting in the potential for continued erosion that will be mitigated with regular road maintenance and restriction of vehicle access to seasonal use only.

Cumulative Effects - No additional actions are proposed within the analysis area that would add to the erosion occurring within the disturbed acres of the road template.

Effects of Alternative 4

Direct Effects - Effects are essentially the same as Alternative 3.

Indirect Effects - Reconstruction of the road template and revegetation of adjacent disturbed soils will slow erosion and result in reduced soil runoff to stream systems in the vicinity. This alternative will continue to allow vehicle access along the road template in Segments B, C and D resulting in the potential for continued erosion that will be mitigated with regular road maintenance and restriction of vehicle access to seasonal use only.

Cumulative Effects - No additional actions are proposed within the analysis area that would add to the erosion occurring within the disturbed acres of the road template.

Effects of Alternative 5

Direct Effects - Effects are essentially the same as Alternative 3, except Segments B, C and D will be managed at Road Maintenance Level 1 and restricted to administrative vehicle traffic year round only. This level of maintenance and reduced traffic will lower potential impacts and minimize disturbance from use, thus allowing the roadbed to fully stabilize and erosion levels to decline.

Indirect Effects - Reconstruction of the road template and revegetation of adjacent disturbed soils will slow erosion and result in reduced soil runoff to stream systems in the vicinity. This alternative will continue to allow administrative vehicle access along the road template in Segments B, C and D resulting in the potential for continued erosion that will be mitigated with regular road maintenance and restriction of vehicle access to seasonal use only.

Cumulative Effects - No additional actions are proposed within the analysis area that would add to the erosion occurring within the disturbed acres of the road template. The actions proposed will contribute to a decline in erosion in the immediate vicinity and an overall decline in effects to the watershed downstream.

Effects of Alternative 6

Direct Effects - Erosion will be reduced on most of the disturbed acres along the road template to low levels with decommission treatments. Treatments will reshape the existing template to restore normal drainage from the area, restore stream crossings to natural functions, and revegetate all disturbed soils along the road. Vehicle access will be discontinued on the route to allow vegetation to become established and restore natural ground cover conditions. Storm run-off will return to near normal conditions resulting in reduced to near natural erosion rates over the 18 to 24 acres of disturbed area along the route.

Indirect Effects - Decommissioning of the road template to restore normal drainage patterns and vegetation cover will reduce erosion within 1 to 2 years to near natural conditions. Reductions in erosion will result in lower inputs of sediment to streams in the vicinity and improvements to aquatic habitat downstream.

Cumulative Effects - No additional actions are proposed within the analysis area that would add to the erosion occurring within the disturbed acres of the road template. The actions proposed will contribute to a decline in erosion in the immediate vicinity and an overall decline in effects to the watershed.

Water

“Rich Mountain Road” traverses the upper headwaters of eight named perennial streams occurring in two fifth-level hydrologic units (HUCs). The western half of the route (Segments A and B) drains to the west or south into the Ellijay River HUC (#0315010202). On the western end of the route drainage flows west into an unnamed tributary that flows into Briar Creek. Tributaries of Turniptown Creek drain the route from the crest of Aaron Mountain east to Rich Mountain. At the crest of Rich Mountain the route crosses the Tennessee Valley Divide and the drainage flows east to the Toccoa River-Upper HUC (#0602000301). Tributaries of Big Creek, Roger Laurel Branch, Butler Creek, Wolf Creek, and Stanley Creek drain the route.

The 5th level HUCs, 6th level HUCs, and Rich Mountain road miles by 6th level HUC for the project area are all listed in the following table:

Miles of Road by 6th Level HUC for the Rich Mountain Road

5th Level HUC	Ellijay River (0315010202)	
6 th Level HUC	031501020202	1.7 Miles
6 th Level HUC	031501020204	2.2 Miles

5th Level HUC **Toccoa River-Upper (0602000301)**
6th Level HUC **060200030106** **5.4 Miles**



Figure 3. Rich Mountain HUC Map

Each of the named perennial streams identified in the watersheds along the route of Rich Mountain Road has an assigned water use classification, or beneficial use, of fishing. The streams have been further classified as primary trout waters by the Georgia Department of Natural Resources (Georgia Rules and Regulations for Water Quality Control, Chapter 391-3-6, August 2003). Streams designated as Primary Trout Waters are waters supporting a self-sustaining population of Rainbow, Brown or Brook trout. Streams designated as Secondary Trout Waters are those with no evidence of natural trout reproduction, but are capable of supporting trout throughout the year. The criterion stated for trout streams by the DNR rules is there shall be no elevation of natural stream temperature for primary trout waters. No streams within the project area are currently identified as partially supporting or not supporting on the Georgia 305(b) listing maintained by the Georgia DNR-Environmental Protection Division.

The major perennial streams are described below, identified by Road Segment. In addition to perennial streams, there are numerous springs that flow from the road cut-bank onto the road, and are captured by the road in some cases, often flowing along the road prism.

Road Segment A – West End to Gap

This segment includes one major perennial stream, a tributary to Briar Creek. Briar Creek is located in the Ellijay River Watershed (6th level huc number 031501020204). The current stream crossing is a ford with mostly a natural rock surface. The substrate of this steep, confined stream above and below the roadbed is mostly bedrock and boulder. Large woody debris (LWD) is also present above and below the road. The existing crossing is stable, although some sediment enters the stream from the road approaches, especially during storm events. The steep stream gradient helps move this sediment downstream. The presences of bedrock, boulder, and LWD in the channel all help maintain channel stability. Upstream of the road, the stream substrate is almost entirely bedrock.

Road Segment B – Gap to Rich Mountain

One crossing of a small, unnamed perennial stream with boulder/cobble substrate occurs in the Segment. There is an existing culvert present, and the crossing is stable. The stream is in similar condition above and below the road. The stream gradient is not very steep (2-4%) and the channel is less confined than other streams in the project area.

Road Segment C – Rich Mountain to Horsepen Mountain

Roger Laurel Branch is the major named perennial in this road segment. It crosses the road segment along with one tributary in two locations. The current stream crossing is an unimproved ford for both stream segments. The surface of both fords has some rock present, but also bare soil. Roger Laurel Branch is a tributary of Big Creek (6th level huc number 060200030106). The stream substrate is dominated by bedrock, boulder and cobble in both streams. Upstream of the road, the stream is steep and confined a cascade or high gradient riffle. The stream segments above and below the road are stable and the road crossing is mostly rock.

Road Segment D – Horsepen Mountain to East End (FS 338)

This segment contains flow channels from several springs that cross the road. At the road crossings of the springs, the road is currently rocky, and the stream is in similar condition above and below the road. In a couple of cases, sediment deposits were visible down slope of the road, or on the fill slope. In these cases, the road has intercepted the spring, causing water to run down the road. This road runoff is carrying sediment to the nearest stream and also causing rutting, or down cutting of the roadbed. This rutting is resulting in concentrated flows of water in the roadbed. In some cases, the road is essentially functioning as a stream or is currently part of the stream network. Sediment trails leaving

the road and entering forested areas in this section are carried for a considerable distance, and all the way to the stream channel in some cases.

Stanley Creek is a major perennial stream in this section. Stanley Creek flows north and east as a tributary of the Toccoa River (6th level huc number 060200030106). Large boulder and sand are the dominant substrate types. Some bedrock is also present. The road is a major sediment source to Stanley Creek, including the existing ford and road approaches to the crossing.

A small perennial stream, located between Brownlow Gap and Stanley Creek has a sand-dominated substrate with sediment sources from the road and dispersed camping near the stream. The current stream crossing is an unimproved ford.

Element: Sedimentation

On most forested watersheds, sediment is the most troublesome pollutant and roads are a major source of that sediment. Sediment can adversely impact water quality by increasing turbidity, affecting the morphology and capacity of channels, changing streambed material size, altering stream temperatures resulting in a reduction of the overall quality of aquatic habitat. Sediment is basically the transport of detached soil particles from erosion into the stream system. The primary mechanism for this transport is storm water runoff, moving the particles from a source overland into a channel or other location. Sediment often goes through a repeating sequence of transport and deposition. In some cases a number of storm events occur before sediment may reach a stream system. A desired condition is to stop the sediments before they enter the streams.

Measure - Estimated acres of soil disturbed that contribute to sedimentation

Bounds for analysis -

Spatial: The Rich Mountain road or travel way passes through three 6th Level HUCs. Figure 3 displays the three 6th Level HUCs in the project vicinity. The bounds for analysis include portions of these 3 HUCs (6th Level). The first two 6th Levels listed eventually drain into the Ellijay River, and the existing road affects small headwater streams. The third 6th level huc listed (60200030106) eventually drains into the Toccoa River and is a larger watershed, larger streams and it has the most Rich Mountain road miles by watershed (5.4 miles).

- For 31501020204, the effects are best evaluated in small tributaries before streams leave NF and enter private land. This includes Whitepath, Little Turniptown, Turniptown, and Briar Creeks. There are 2.2 Rich Mountain road miles in this 6th level huc.
- For 31501020202, the effects are best evaluated in very small tributaries before these streams leave the NF and enter private land. This includes Little Rock Creek. The road segment in this huc/watershed follows the upper watershed

boundary and any effects are on 1st order streams (the road segment is nearly flat in this 6th level huc). There are 1.7 Rich Mountain road miles in this 6th level huc.

- For 60200030106, the effects are best evaluated in tributaries before these streams leave the NF and enter private land. This includes Stanley, Big, and Butler Creeks. Stanley is a larger tributary than others listed. It also has a major perennial stream crossing. There are 5.4 Rich Mountain road miles in this 6th level huc.

Temporal : The current condition through the next 10 years.

Existing Conditions

Streams within the project area are mostly 1st and 2nd stream orders. This is characteristic of upper side slope and ridge top topographic positions, commonly called “headwaters” in stream systems. The major perennial streams, such as Stanley Creek and Roger Laurel Branch are 3rd order streams at the road crossings because they have collected smaller tributary streams as they flow down the mountains. In each of these streams, sediment levels increase after rainfall storm events. One major source of sediment is runoff from dirt and gravel roads. Another, less obvious, source is sediment already in the streams from several sources that is moved by increased water volume and flow after storm events.

Effects of Alternative 1 (No Action)

Direct Effects - When eroded soils are delivered to the stream system, they can fill interstitial space between substrate particles, fall out of the water column and get deposited on the stream bottom, or continue to be transported downstream to other stream reaches. In this alternative, all road segments (9.3 miles) continue to erode with approximately 18 to 24 acres contributing to sedimentation. Erosion will continue at levels described for existing condition over 18 to 24 acres, and could increase over time as users continue to create disturbed areas adjacent to the current travel way.

Indirect Effects - Indirect effects include the delivery of eroded soil to stream channels resulting in the loss of aquatic habitats, the loss of total pool volume downstream, or a shift in substrate particle size distribution downstream of road segments.

Cumulative Effects - No ground disturbing projects have been implemented in the past 5 years in the project vicinity. No additional actions are currently proposed or expect to be proposed in the reasonably foreseeable future within the analysis area that would add to the erosion and sedimentation currently occurring within the disturbed acres of the road template.

Effects of Alternative 2

Direct Effects - When eroded soils are delivered to the stream system, they can fill interstitial space between substrate particles, fall out of the water column and get deposited on the stream bottom, or continue to be transported downstream to other stream reaches. In this alternative short-term erosion will continue during the reconstruction period and for 6 months to 1 year after completion until adequate cover is attained. After reconstruction, acres contributing to sedimentation will be reduced by 5 to 7 acres below existing condition. Reconstruction of stream crossings and road approaches will also reduce sedimentation downstream of the crossings. This alternative will continue to allow vehicle access along the road template resulting in the potential for continued erosion for the entire length of the road (9.3 miles of open road) unless road maintenance is applied on a regular basis.

Indirect Effects - Indirect effects will be reduced when the road and stream crossings are reconstructed. Less sediment will be delivered to the stream channel resulting in improved aquatic habitat and water quality.

Cumulative Effects - No ground disturbing projects have been implemented in the past 5 years in the project vicinity. No additional actions are currently proposed or expect to be proposed in the reasonably foreseeable future within the analysis area that would add to the erosion and sedimentation currently occurring within the disturbed acres of the road template.

Effects of Alternative 3 (Proposed Action)

Direct Effects - When eroded soils are delivered to the stream system, they can fill interstitial space between substrate particles, fall out of the water column and get deposited on the stream bottom, or continue to be transported downstream to other stream reaches. In this alternative short-term erosion will continue during the reconstruction period and for 6 months to 1 year after completion until adequate cover is attained. After reconstruction, acres contributing to sedimentation will be reduced by 5 to 7 acres below existing condition. Reconstruction of stream crossings and road approaches will also reduce sedimentation downstream of the crossings. Additionally, the decommissioning of segment A will further reduce the area contributing to erosion by 3 to 4 acres and return normal runoff and infiltration processes to this segment during storm events. This alternative will continue to allow vehicle access along the road template resulting in the potential for continued erosion for road segments B, C, and D (8.0 miles of open road) unless road maintenance is applied on a regular basis.

Indirect Effects - Indirect effects will be reduced when the road and stream crossings are reconstructed. Less sediment will be delivered to the stream channel after reconstruction of segments B, C, and D; and decommissioning of segment A, resulting in improved aquatic habitat and water quality.

Cumulative Effects - No ground disturbing projects have been implemented in the past 5 years in the project vicinity. No additional actions are currently proposed or expect to be proposed in the reasonably foreseeable future within the analysis area that would add to the erosion and sedimentation currently occurring within the disturbed acres of the road template.

Effects of Alternative 4

Direct Effects - When eroded soils are delivered to the stream system, they can fill interstitial space between substrate particles, fall out of the water column and get deposited on the stream bottom, or continue to be transported downstream to other stream reaches. In this alternative short-term erosion will continue during the reconstruction period and for 6 months to 1 year after completion until adequate cover is attained. After reconstruction, acres contributing to sedimentation will be reduced by 5 to 7 acres below existing condition. Reconstruction of stream crossings and road approaches will also reduce sedimentation downstream of the crossings. Additionally, the decommissioning of segment A will further reduce the area contributing to erosion by 3 to 4 acres and return normal runoff and infiltration processes to this segment during storm events. This alternative will continue to allow vehicle access along the road template resulting in the potential for continued erosion for road segments B, C, and D (8.0 miles of open road) unless road maintenance is applied on a regular basis.

Indirect Effects - Indirect effects will be reduced when the road and stream crossings are reconstructed. Less sediment will be delivered to the stream channel after reconstruction of segments B, C, and D; and decommissioning of segment A, resulting in improved aquatic habitat and water quality.

Cumulative Effects - No ground disturbing projects have been implemented in the past 5 years in the project vicinity. No additional actions are currently proposed or expect to be proposed in the reasonably foreseeable future within the analysis area that would add to the erosion and sedimentation currently occurring within the disturbed acres of the road template.

Effects of Alternative 5

Direct Effects - Effects are essentially the same as Alternative 3, except Segments B, C and D will be managed at Road Maintenance Level 1 and restricted to administrative vehicle traffic year round only. This level of maintenance and reduced traffic will lower potential impacts and minimize disturbance from use, thus allowing the roadbed to fully stabilize and erosion levels to decline. This alternative will continue to allow vehicle access along the road template resulting in the potential for continued erosion for road segments B, C, and D; however the total miles of open road are 0 due to the maintenance level 1 designation of segments B, C, and D.

Indirect Effects - Reconstruction of the road template, revegetation of adjacent disturbed soils, and reconstruction of stream crossings will slow erosion and result in reduced soil

runoff to stream systems in the vicinity. This alternative will continue to allow administrative vehicle access along the road template in Segments B, C and D resulting in the potential for continued erosion that will be mitigated with regular road maintenance and restriction of vehicle access to seasonal use only. Less sediment will be delivered to the stream channel after reconstruction of segments B, C, and D; and decommissioning of segment A, resulting in improved aquatic habitat and water quality.

Cumulative Effects - No ground disturbing projects have been implemented in the past 5 years in the project vicinity. No additional actions are currently proposed or expect to be proposed in the reasonably foreseeable future within the analysis area that would add to the erosion and sedimentation currently occurring within the disturbed acres of the road template.

Effects of Alternative 6

Direct Effects - Erosion will be reduced on most of the disturbed acres along the road template to low levels with decommission treatments. Treatments will reshape the existing template to restore normal drainage from the area, restore stream crossings to natural functions, and revegetate all disturbed soils along the road. Vehicle access will be discontinued on the route to allow vegetation to become established and restore natural ground cover conditions. Storm run-off and infiltration processes in the road prism and adjacent areas will be restored. Areas of erosion contributing to sedimentation will be reduced approximately 18 to 24 acres. With decommissioning of all segments, the total road miles will be 0.

Indirect Effects - Decommissioning of the road template to restore normal drainage patterns and vegetation cover will reduce erosion within 1 to 2 years to near natural conditions. Reductions in erosion will result in lower inputs of sediment to streams in the vicinity and improvements to aquatic habitat and water quality downstream.

Cumulative Effects - No ground disturbing projects have been implemented in the past 5 years in the project vicinity. No additional actions are currently proposed or expect to be proposed in the reasonably foreseeable future within the analysis area that would add to the erosion and sedimentation currently occurring within the disturbed acres of the road template.

Element: Heritage Resources

Measure - The National Historic Preservation Act (NHPA) and Forest Wide Goal 77

Bounds of Analysis: - **Spatial**: 50' on either side of the road. **Temporal**: 1-2 years during road reconstruction, and indefinitely for future studies.

Existing Conditions

Our current knowledge of the cultural resources along the Rich Mountain Road comes from (1) the recent archeological survey completed for the road, and (2) from previous investigations of site looting in the area within the past few years. A total of three new sites were found within road right-of way. All of these prehistoric sites are approximately 5000-7000 years old. Other sites are known in the vicinity; however, they are outside the road corridor. These three new sites will be recommended as eligible to the National Register to the Georgia State Historic Preservation Officer and the Tribal Historic Preservation Officers until further testing can determine otherwise. All sites will be protected or any prior disturbances will be minimized through the use of appropriate mitigation measures. These measures could include closing off areas to vehicles with rocks or trees, filling in a site that has deep ruts, or keeping the disturbance within the road prism (12') to protect the rest of the site that has not been disturbed.

Effects of Alternative 1 (No Action)

Direct Effects - No maintenance activities will occur, and the road will continue to deteriorate. This deterioration such as compaction, erosion, and rutting at some locations along the road is causing damage to the archeological sites in the road. This alternative does not provide for any protection of the archeological resources.

Indirect Effects - By keeping this road open, other sites along and outside the corridor may be at risk for looting, as well as continued looting of the sites from previous episodes. Lack of law enforcement due to poor access and continued illegal OHV use will allow looting activities to continue.

Cumulative Effects - This alternative does not meet the NHPA or Forestwide Goal 77 due to easy access to the sites and no protection of the known sites in the road corridor.

Effects of Alternative 2

Direct Effects - This alternative would maintain the entire Rich Mountain Road so that high clearance vehicles would be able to drive through this road year round. There will be no direct effects because the three sites would be protected during reconstruction, and prior disturbances will be minimized.

Indirect Effects - Year round access would provide more vehicles and easier access to sites by looters. However, law enforcement presence would also likely increase due to improved road conditions.

Cumulative Effects - This alternative does not meet the NHPA or Forest Wide goal 77 because it provides year round access to sites in this area.

Effects of Alternative 3 (Proposed Action)

Direct Effects - There will be no direct effects from this alternative because this would allow protection of the sites from the road reconstruction. Segments B, C, and D would be open and Segment A would be decommissioned. Any damage that has already occurred will be minimized during reconstruction. No reconstruction or maintenance activities will occur outside the existing road template on or near the three sites.

Indirect Effects - This alternative would allow seasonal opening of the eastern 8 miles of road and this would allow easy access during that time for potential site looting to occur. However since the road will be seasonally closed and road improvement would allow easier access for a law enforcement presence, increased control is expected.

Cumulative Effects - This partially meets the NHPA and forest wide goal 77 because it allows for protection of the known sites and it seasonally closes vehicle access to Segment B of the road that provides direct access to previously looted sites. The seasonal closure will still provide public access during certain times of the year and there could be opportunities for site looting when the road is open.

Effects of Alternative 4

Direct Effects - This alternative would provide public access to the eastern 6.1 miles (Segment C and D) of the road, administrative access to 1.9 miles of Segment B, and decommissioning the western 1.3 miles (Segment A) of the road. There would be no direct effects to the three sites and they would be protected from any additional disturbance from the road reconstruction and potential looting. Other known sites would be safe from looting as well, since the western one-third of the road would be closed to public access except for foot travel.

Indirect Effects - No motorized access to the western 3 miles could significantly reduce the chances of additional site looting.

Cumulative Effects - This alternative meets the NHPA and forest wide goal 77 because it protects the known sites as well as lessens the chances of site looting by closing Segment B except for Administrative Use only with no public vehicle access.

Effects of Alternative 5

Direct Effects - By closing the entire road to public motorized use, this alternative would have no direct effects to the sites. This alternative will provide for protection of the sites during maintenance of the road prior to closing the road. Site looting should decrease as well with no motorized access.

Indirect Effects - This alternative would have the least effect to cultural resources. No legal motorized access means fewer chances of looters hiking into the sites from the parking areas.

Cumulative Effects - This alternative meets the NHPA and forest wide goal 77 since the known sites will be protected and access closed to motorized vehicles.

Effects of Alternative 6

Direct Effects - This alternative would provide for protection of the known sites during decommissioning activities, and there would be no direct effects to the sites.

Indirect Effects - This would be the same as Alternative 5. No legal motorized access means fewer chances of looters hiking into the sites from the parking areas.

Cumulative Effects - This alternative meets the NHPA and forest wide goal 77 because the known sites will be protected during decommissioning activities and access is being closed to all vehicles.

BIOLOGICAL ENVIRONMENT

Element - Wildlife and Wildlife Habitat

Measure - Effects on wildlife populations and habitat from project activities, from habitat enhancement projects and from human disturbance/poaching; and effects on hunting opportunities.

Bounds of Analysis – **Spatial:** Potential impacts to populations and habitat conditions immediately adjacent to the Rich Mountain Road and within the Rich Mountain Wildlife Management Area. **Temporal:** The period of time road treatment activities could occur (1-2 years), and more long-term impacts (10-15 years) from potential habitat management opportunities and hunter access provided by the Rich Mountain road.

Existing Conditions

Rich Mountain road lies within the Rich Mountain Wildlife Management Area (WMA), which is cooperatively managed by the Georgia Department of Natural Resources (DNR). The road provides the primary access for hunters to the interior of the WMA. There are several sites along the Rich Mountain road that receive heavy use as hunt camps during the managed deer hunts. Law enforcement personnel from the Forest Service and Georgia DNR personnel also use the road for law enforcement activities.

There are four (4) existing permanent wildlife openings near Big Bald, Little Bald and Aaron Mountain that are accessed from the Rich Mountain road. However, due to the deteriorated condition of the road, Georgia DNR personnel have not been able to maintain these openings with farm equipment for over 10 years. Woody seedlings and

saplings now dominate these openings (G. Vaughan GA DNR, pers. comm.). Because of the condition of the road, opportunities for active habitat management such as prescribed burning are limited over much of the area. There are several other permanent wildlife openings in other portions of the WMA that are maintained on an annual basis.

Hunting use is greatest during the 7-day long firearms deer and bear hunt which is generally held in late November/early December. Annually, approximately 650-700 hunters harvest 60-70 deer and 5-10 bears during this hunt. Significant hunting use also occurs during the archery season (mid September to mid October) and the spring turkey season (mid March to mid May). Approximately 250-350 hunters use the WMA during the archery season and harvest approximately 5-10 deer. Approximately 150-200 hunters participate in the spring turkey season on the WMA and harvest 10-15 turkeys. Hunter use during the small game season (mid August to end of February) is more moderate.

The Rich Mountain WMA contains a variety of both game and non-game wildlife species. Game species present in this portion of the Forest include deer, turkey, squirrel, grouse and bears. As with most of the Forest, quail populations are low in the area. Non-game species such as small mammals, reptiles and amphibians, and songbirds, including many neo-tropical migrants are present on the area.

Management Prescriptions 1.A (Rich Mountain Wilderness) and 4.I (Natural Area – formerly the Rich Mountain High Elevation Area (MA-4)) comprise the majority of the WMA. Very little active vegetation management has occurred in these areas in the last 2 decades. As a result, mid and late successional conditions predominate and abundant habitat is available for species that use older forests. Because much of the area consists of older hardwood forests, the availability of hard mast such as acorns and hickory nuts is high. Early successional conditions are extremely limited on the WMA. As a result, populations of species that require young forests or mix of successional conditions are present at low to moderate levels. This includes game species such as ruffed grouse, deer, turkey, bear, and a variety of non-game species including songbirds such as indigo bunting, yellow-breasted chat, and chestnut-sided warbler.

The presence of roads can negatively impact wildlife populations for species such as bears (Beringer 1986; Brody and Pelton 1989). Large, multilane roads such as Interstate Highways can fragment bear habitat. However, the type of road and amount of use influence the degree of impacts. Paved roads and high traffic volumes can have negative impacts whereas low-traffic roads and trails are used by bears as travel ways and provide the benefit of additional edge and associated soft mast. (B. Fletcher, GA DNR, pers. comm.). Given the condition and use pattern of the Rich Mountain road, it is unlikely to have any negative effects on bear populations.

Effects of Alternative 1 (No Action)

Direct Effects- This alternative will perpetuate current conditions and no direct impacts to wildlife populations or habitat are expected.

Indirect Effects - No maintenance activities will occur on the Rich Mountain road under this alternative and the condition of the road is expected to continue to deteriorate. This likely will result in a decrease in access for hunters as road conditions decline. Since this is the primary access to the interior of the WMA, hunting opportunities will decrease. It also is likely to further hamper the ability of law enforcement personnel to adequately patrol the area, which could increase the possibility of poaching impacts to species such as deer and bear. Wildlife habitat management opportunities such as maintenance of existing wildlife openings and prescribed burning will remain limited.

Cumulative Effects – No additional activities affecting wildlife habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Impacts from the Rich Mountain road are limited to the area immediately adjacent to the road. Therefore no cumulative effects to wildlife or wildlife habitats are expected.

Effects of Alternative 2

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct impacts from this alternative on wildlife habitats and populations.

Indirect Effects - Under this alternative, hunter access would be enhanced due to improved conditions of the Rich Mountain road. This would increase hunting opportunities within the WMA throughout the year. The improved access could increase the possibility of poaching, especially since the road will remain open year-round. However, the road improvements also will result in improved ability of law enforcement personnel to patrol the area. Improved road conditions also will permit the restoration of maintenance activities of existing wildlife openings by Georgia DNR personnel. It also should lead to additional opportunities for wildlife habitat enhancement projects such as prescribed burning. These management activities should result in improved wildlife habitat conditions on the WMA.

While increased use of the road by hunters is expected, the improved road conditions are likely to reduce the attraction of the area to recreational OHV enthusiasts and a decrease in this type of use is anticipated. Overall use should remain relatively low and increased disturbance of wildlife such as bears is not likely.

Cumulative Effects – No additional activities affecting wildlife habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to wildlife or wildlife habitats are expected.

Effects of Alternative 3 (Proposed Action)

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct impacts from this alternative on wildlife habitats and populations.

Indirect Effects -Under this alternative, hunter access would be enhanced due to improved conditions of the Rich Mountain road. This will increase hunting opportunities within the WMA. Although the decommissioning of the western 1.3 miles of the road (Segment A) will restrict access to that portion of the WMA, the majority of the WMA would be accessible from the portion of the road to remain open.

Although improved access could increase the possibility of poaching, it also will result in improved ability of law enforcement personnel to adequately patrol the area. In addition, the road will be closed seasonally to vehicular traffic, which will reduce opportunities for poaching and other illegal activities. Improved road conditions also will permit the restoration of maintenance activities of existing wildlife openings by Georgia DNR personnel. It also should lead to additional opportunities for wildlife habitat enhancement projects such as prescribed burning. These management activities should result in improved wildlife habitat conditions on the WMA.

While increased use of the road by hunters is expected, the improved road conditions are likely to reduce the attraction of the area to recreational OHV enthusiasts and a decrease in this type of use is anticipated. Overall use should remain relatively low and this, in conjunction with the seasonal closure of the road will result in a decrease in disturbance of wildlife such as bears.

Cumulative Effects – No additional activities affecting wildlife habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to wildlife or wildlife habitats are expected.

Effects of Alternative 4

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct impacts from this alternative on wildlife habitats and populations.

Indirect Effects -The effects of this alternative would be similar to Alternative 3. The improved road conditions will increase the hunting opportunities within the WMA.

Although access will be improved, the decommissioning of the western 1.3 miles of the road (Segment A) and administrative closure of the adjacent 1.9 miles of road (Segment B) will restrict access to that portion of the WMA.

Although improved access could increase the possibility of poaching, it also will result in improved ability of law enforcement personnel to adequately patrol the area. In addition, the road will be closed seasonally to vehicular traffic, which will reduce opportunities for poaching and other illegal activities. Improved road conditions also will permit the restoration of maintenance activities of existing wildlife openings by Georgia DNR personnel. It also should lead to additional opportunities for wildlife habitat enhancement projects such as prescribed burning. These management activities should result in improved wildlife habitat conditions on the WMA.

While increased use of the road by hunters is expected, the improved road conditions are likely to reduce the attraction of the area to recreational OHV enthusiasts and a decrease in this type of use is anticipated. Overall use should remain relatively low and this, in conjunction with the seasonal and/or administrative closure of the road will result in a decrease in disturbance of wildlife such as bears.

Cumulative Effects – No additional activities affecting wildlife habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to wildlife or wildlife habitats are expected.

Effects of Alternative 5

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct impacts from this alternative on wildlife habitats and populations.

Indirect Effects -Under this alternative, the entire road would be closed except for administrative use. This would significantly impact hunting opportunities throughout the year. Because much of the WMA already is in designated Wilderness, with the closure of the Rich Mountain road very little of the area will be readily accessible to hunters and other users. The area would still be accessible to hunters on foot, but without road access, hunting use of the area would decline substantially.

With the road closed to vehicular traffic except for administrative use, poaching is unlikely to occur. Similarly wildlife disturbance will be minimal. The limited road improvements should permit the restoration of maintenance activities of existing wildlife openings by Georgia DNR personnel. It also should lead to additional opportunities for wildlife habitat enhancement projects such as prescribed burning. These management activities should result in improved wildlife habitat conditions on the WMA.

Cumulative Effects – No additional activities affecting wildlife habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to wildlife or wildlife habitats are expected.

Effects of Alternative 6

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct impacts from this alternative on wildlife habitats and populations.

Indirect Effects -Under this alternative, the entire road would be decommissioned. This would significantly impact hunting opportunities throughout the year. Because much of the WMA already is in designated Wilderness, with the closure of the Rich Mountain road, very little of the area will be readily accessible to hunters and other users. The area would still be accessible to hunters on foot, but without road access, hunting use of the area would decline substantially.

With the road decommissioned, poaching is unlikely to occur since it will be permanently closed to vehicular use. Similarly, wildlife disturbance will be minimal. However, the decommissioning of the road will eliminate the opportunity for the restoration of maintenance activities of existing wildlife openings by Georgia DNR personnel. It also will significantly restrict opportunities for wildlife habitat enhancement projects such as prescribed burning.

Cumulative Effects – No additional activities affecting wildlife habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to wildlife or wildlife habitats are expected.

Element - Management Indicator Species

Measure - Effects on populations and habitat conditions for individual MIS

Bounds of Analysis – **Spatial:** Potential impacts to populations and habitat conditions immediately adjacent to the Rich Mountain Road and on the Rich Mountain WMA as well as in relationship to Forest-wide distribution and trends. **Temporal:** The period of time road treatment activities could occur (1-2 years), and more long-term impacts (10-15 years) from potential habitat management opportunities provided by the Rich Mountain road.

Introduction

To help evaluate the effects of management practices on plants, animals, and fisheries, the Management Indicator Species (MIS) concept is used. Each MIS selected for the project represents many other species with similar habitat requirements. MIS have been selected because population changes to those species indicate the effects of management activities on the habitat.

The recently revised Forest Plan identifies 15 MIS for the Chattahoochee-Oconee National Forests. Of these, 10 occur within or near the Rich Mountain project area. These species were selected because they occur in this portion of the Forest and have populations or habitats that could directly or indirectly be affected by the project. The following is a brief summary of the Forest-wide status and trends for each of these species and a discussion of the existing habitat conditions on the Rich Mountain WMA. These Forest-wide trends are useful in putting the project-level effects into perspective. For those species that also were MIS in the original 1985 Forest Plan (e.g. Acadian flycatcher, pileated woodpecker, white-tailed deer, black bear), much of the Forest-wide population and habitat data was compiled and analyzed previously (USDA Forest Service 2003). Most of the MIS in the revised Forest Plan are birds that are monitored annually through the Forest's breeding bird surveys (USDA Forest Service 2004b).

Pine Warbler

Existing Conditions

This species was selected as a MIS to help indicate the effects of management on species associated with pine and pine-oak forests. The pine warbler uses mid to late successional pine forests through the year. (Hamel 1992). It occurs in both open pine woodlands and dense pine plantations, but seldomly uses hardwood stands. The highest numbers seem to occur where pure stands of pine are found. It is less abundant as the proportion of hardwood tree species increases (NatureServe 2004). Bird survey data suggests that pine warbler populations have been relatively stable on the Forest. The availability of older pine stands on the Forest has increased over the last few decades. However, recent outbreaks of Southern Pine beetle have reduced the availability of these habitats on some portions of the Forest. The majority of the Rich Mountain project area consists of hardwood forests. Therefore pine warbler populations are low on the Rich Mountain area due to the limited availability of older pine forests.

Effects of Alternative 1 (No Action)

Direct Effects- This alternative will perpetuate current conditions and no direct impacts to the pine warbler are expected.

Indirect Effects - This alternative will perpetuate current conditions and no indirect impacts to the pine warbler are expected.

Cumulative Effects - Although somewhat limited on the Rich Mountain WMA, mature pine forests used by pine warblers are abundant on the Forest. Pine warbler populations on the Forest are expected to increase through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature pine forests. Impacts from the Rich Mountain road are limited to the area immediately adjacent to the road. Therefore no cumulative effects to pine warblers or their habitat are expected.

Effects of Alternative 2

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the pine warbler.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However none of these activities would affect the availability of mature pine forests. Therefore, there will be no indirect effects from this alternative on the pine warbler.

Cumulative Effects - Although somewhat limited on the Rich Mountain WMA, mature pine forests used by pine warblers are abundant on the Forest. Pine warbler populations on the Forest are expected to increase through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature pine forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to pine warblers or their habitat are expected.

Effects of Alternative 3 (Proposed Action)

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the pine warbler.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However none of these activities would affect the availability of mature pine forests. Therefore, there will be no indirect effects from this alternative on the pine warbler.

Cumulative Effects - Although somewhat limited on the Rich Mountain WMA, mature pine forests used by pine warblers are abundant on the Forest. Pine warbler populations on the Forest are expected to increase through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain

WMA that would affect the availability of mature pine forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to pine warblers or their habitat are expected.

Effects of Alternative 4

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the pine warbler.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However none of these activities would affect the availability of mature pine forests. Therefore, there will be no indirect effects from this alternative on the pine warbler.

Cumulative Effects - Although somewhat limited on the Rich Mountain WMA, mature pine forests used by pine warblers are abundant on the Forest. Pine warbler populations on the Forest are expected to increase through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature pine forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to pine warblers or their habitat are expected.

Effects of Alternative 5

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the pine warbler.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However none of these activities would affect the availability of mature pine forests. Therefore, there will be no indirect effects from this alternative on the pine warbler.

Cumulative Effects - Although somewhat limited on the Rich Mountain WMA, mature pine forests used by pine warblers are abundant on the Forest. Pine warbler populations on the Forest are expected to increase through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature pine forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to pine warblers or their habitat are expected.

Effects of Alternative 6

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the pine warbler.

Indirect Effects - Under this alternative, the entire road would be decommissioned. It will significantly restrict opportunities for wildlife habitat enhancement projects, although limited activities still would be possible. However, none of the activities would affect the availability of mature pine forests and therefore, there will be no indirect effects from this alternative on the pine warbler.

Cumulative Effects - Although somewhat limited on the Rich Mountain WMA, mature pine forests used by pine warblers are abundant on the Forest. Pine warbler populations on the Forest are expected to increase through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature pine forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to pine warblers or their habitat are expected.

Chestnut-sided Warbler

Existing Conditions

This species was selected as a MIS to help indicate the effects of management on species associated with high-elevation early successional forests. Chestnut-sided warblers are found in second-growth forests, overgrown fields, woodland edges, and in open, park-like woods (Hamel 1992). They are most common in suitable habitat over 3500 feet elevation, but occur sparingly down to 2000 feet. They are associated with dense vegetation in the form of shrubs and small trees about 3 feet above the ground that provides nesting sites and foraging areas (DeGraaf et al. 1991). Chestnut-sided warblers can be found in early successional habitats at higher elevations throughout the Forest. However, these types of habitat are limited on the Forest and have decreased due to a reduction in active forest management. Chestnut-sided warbler populations are low on the Rich Mountain area due to the limited availability of high elevation, early successional habitats.

Effects of Alternative 1 (No Action)

Direct Effects- This alternative will perpetuate current conditions and no direct impacts to the chestnut-sided warbler are expected.

Indirect Effects – Opportunities for wildlife enhancement activities will remain limited in this alternative due to the poor condition of the road. This alternative will perpetuate current conditions and no indirect impacts to the chestnut-sided warbler are expected.

Cumulative Effects - High-elevation early successional habitat used by the chestnut-sided warbler are limited on the Rich Mountain WMA and the Forest as a whole. The revised Forest Plan has an objective to create and maintain a high elevation early successional component on the Forest, and chestnut-sided warbler populations are expected to increase through the implementation of the Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of high elevation early successional forests. Impacts from the Rich Mountain road are limited to the area immediately adjacent to the road. Therefore no cumulative effects to chestnut-sided warblers or their habitat are expected.

Effects of Alternative 2

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the chestnut-sided warbler.

Indirect Effects - Road maintenance activities in this alternative will provide opportunities for limited wildlife habitat enhancement projects in the portion of the Rich Mountain WMA adjacent to the road. These management activities could result in slight improvements in habitat conditions for the chestnut-sided warbler.

Cumulative Effects - High-elevation early successional habitat used by the chestnut-sided warbler are limited on the Rich Mountain WMA and the Forest as a whole. The revised Forest Plan has an objective to create and maintain a high elevation early successional component on the Forest, and chestnut-sided warbler populations are expected to increase through the implementation of the Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of high elevation early successional forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to chestnut-sided warblers or their habitat are expected.

Effects of Alternative 3 (Proposed Action)

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the chestnut-sided warbler.

Indirect Effects - Road maintenance activities in this alternative will provide opportunities for limited wildlife habitat enhancement projects in the portion of the Rich

Mountain WMA adjacent to the road. These management activities could result in slight improvements in habitat conditions for the chestnut-sided warbler.

Cumulative Effects - High-elevation early successional habitat used by the chestnut-sided warbler are limited on the Rich Mountain WMA and the Forest as a whole. The revised Forest Plan has an objective to create and maintain a high elevation early successional component on the Forest, and chestnut-sided warbler populations are expected to increase through the implementation of the Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of high elevation early successional forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to chestnut-sided warblers or their habitat are expected.

Effects of Alternative 4

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the chestnut-sided warbler.

Indirect Effects - Road maintenance activities in this alternative will provide opportunities for limited wildlife habitat enhancement projects in the portion of the Rich Mountain WMA adjacent to the road. These management activities could result in slight improvements in habitat conditions for the chestnut-sided warbler.

Cumulative Effects - High-elevation early successional habitat used by the chestnut-sided warbler are limited on the Rich Mountain WMA and the Forest as a whole. The revised Forest Plan has an objective to create and maintain a high elevation early successional component on the Forest, and chestnut-sided warbler populations are expected to increase through the implementation of the Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of high elevation early successional forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to chestnut-sided warblers or their habitat are expected.

Effects of Alternative 5

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the chestnut-sided warbler.

Indirect Effects - Road maintenance activities in this alternative will provide opportunities for limited wildlife habitat enhancement projects in the portion of the Rich

Mountain WMA adjacent to the road. These management activities could result in slight improvements in habitat conditions for the chestnut-sided warbler.

Cumulative Effects - High-elevation early successional habitat used by the chestnut-sided warbler are limited on the Rich Mountain WMA and the Forest as a whole. The revised Forest Plan has an objective to create and maintain a high elevation early successional component on the Forest, and chestnut-sided warbler populations are expected to increase through the implementation of the Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of high elevation early successional forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to chestnut-sided warblers or their habitat are expected.

Effects of Alternative 6

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the chestnut-sided warbler.

Indirect Effects - Road decommissioning would significantly restrict opportunities for wildlife habitat enhancement projects in the portion of the Rich Mountain WMA adjacent to the road. Therefore habitat conditions for chestnut-sided warbler are expected to be maintained at current levels.

Cumulative Effects - High-elevation early successional habitat used by the chestnut-sided warbler are limited on the Rich Mountain WMA and the Forest as a whole. The revised Forest Plan has an objective to create and maintain a high elevation early successional component on the Forest, and chestnut-sided warbler populations are expected to increase through the implementation of the Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of high elevation early successional forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to chestnut-sided warblers or their habitat are expected

Hooded Warbler

Existing Conditions

This species was selected as a MIS to help indicate the effects of management on species associated with mature mesic deciduous forests. Hooded warblers are found in mixed hardwood forests of beech, maple, hickory and oaks with a dense undergrowth (DeGraaf et al 1991). They nest in the understory of deciduous forests, and a dense shrub layer and scant ground cover are important (NatureServe 2004). Mature forests with a

structurally diverse understory and midstory layers are favored. Bird survey data suggests that hooded warbler populations on the Forest have increased somewhat on the Forest over the last 10 years. The availability of older mesic hardwood stands on the Forest has increased over the last few decades. The majority of the Rich Mountain project area consists of mature hardwood forests. Hooded warblers are common on the Rich Mountain area due to the abundance of suitable habitat.

Effects of Alternative 1 (No Action)

Direct Effects- This alternative will perpetuate current conditions and no direct impacts to the hooded warbler are expected.

Indirect Effects - This alternative will perpetuate current conditions and no indirect impacts to the hooded warbler are expected.

Cumulative Effects - Mature mesic hardwood forests used by hooded warblers are abundant on the Rich Mountain WMA and Forest as a whole. The revised Forest Plan has an objective to increase the structural diversity in mature mesic deciduous forests and hooded warbler populations on the Forest are expected to increase through the implementation of the Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature mesic hardwood forests. Impacts from the Rich Mountain road are limited to the area immediately adjacent to the road. Therefore no cumulative effects to hooded warblers or their habitat are expected.

Effects of Alternative 2

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the hooded warbler.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However none of these activities would affect the availability of mature mesic hardwood forests. Therefore, there will be no indirect effects from this alternative on the hooded warbler.

Cumulative Effects - Mature mesic hardwood forests used by hooded warblers are abundant on the Rich Mountain WMA and Forest as a whole. The revised Forest Plan has an objective to increase the structural diversity in mature mesic deciduous forests and hooded warbler populations on the Forest are expected to increase through the implementation of the Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature mesic hardwood forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to hooded warblers or their habitat are expected.

Effects of Alternative 3 (Proposed Action)

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the hooded warbler.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However none of these activities would affect the availability of mature mesic hardwood forests. Therefore, there will be no indirect effects from this alternative on the hooded warbler.

Cumulative Effects - Mature mesic hardwood forests used by hooded warblers are abundant on the Rich Mountain WMA and Forest as a whole. The revised Forest Plan has an objective to increase the structural diversity in mature mesic deciduous forests and hooded warbler populations on the Forest are expected to increase through the implementation of the Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature mesic hardwood forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to hooded warblers or their habitat are expected.

Effects of Alternative 4

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the hooded warbler.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However none of these activities would affect the availability of mature mesic hardwood forests. Therefore, there will be no indirect effects from this alternative on the hooded warbler.

Cumulative Effects - Mature mesic hardwood forests used by hooded warblers are abundant on the Rich Mountain WMA and Forest as a whole. The revised Forest Plan has an objective to increase the structural diversity in mature mesic deciduous forests and hooded warbler populations on the Forest are expected to increase through the implementation of the Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature mesic hardwood forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to hooded warblers or their habitat are expected.

Effects of Alternative 5

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the hooded warbler.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However none of these activities would affect the availability of mature mesic hardwood forests. Therefore, there will be no indirect effects from this alternative on the hooded warbler.

Cumulative Effects - Mature mesic hardwood forests used by hooded warblers are abundant on the Rich Mountain WMA and Forest as a whole. The revised Forest Plan has an objective to increase the structural diversity in mature mesic deciduous forests and hooded warbler populations on the Forest are expected to increase through the implementation of the Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature mesic hardwood forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to hooded warblers or their habitat are expected.

Effects of Alternative 6

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the hooded warbler.

Indirect Effects - Under this alternative, the entire road would be decommissioned. This will significantly restrict opportunities for wildlife habitat enhancement projects, although limited activities still would be possible. However, none of these activities would affect the availability of mature mesic hardwood forests and therefore, there will be no indirect effects from this alternative on the hooded warbler.

Cumulative Effects - Mature mesic hardwood forests used by hooded warblers are abundant on the Rich Mountain WMA and Forest as a whole. The revised Forest Plan has an objective to increase the structural diversity in mature mesic deciduous forests and hooded warbler populations on the Forest are expected to increase through the implementation of the Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature mesic hardwood forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to hooded warblers or their habitat are expected.

Prairie Warbler

Existing Conditions

This species was selected as a MIS to help indicate the effects of management on species associated with early successional forests. Prairie warblers are shrubland nesting birds found in suitable habitats throughout the Southern Appalachians, Piedmont, and Coastal Plain (Hamel 1992). Prairie warblers require a dense forest regeneration or open shrubby conditions in a forest setting. Near optimal habitat conditions are characterized by regeneration, thinned areas or patchy openings 10 acres or more in size (Nature Serve 2004). Populations respond favorably to conditions created 3 to 10 years following regeneration in larger forest patches (Lancia et al. 2000). Prairie warblers occur through the Forest. Although a reduction in active forest management has resulted in a decreased availability of early successional habitat, bird survey data suggest that prairie warbler populations have been relatively stable on the Forest. Prairie warbler populations are low on the Rich Mountain area due to the limited availability of early successional habitats.

Effects of Alternative 1 (No Action)

Direct Effects- This alternative will perpetuate current conditions and no direct impacts to the prairie warbler are expected.

Indirect Effects – Opportunities for wildlife enhancement activities will remain limited in this alternative due to the poor condition of the road. This alternative will perpetuate current conditions and no indirect impacts to the prairie warbler are expected.

Cumulative Effects - Early successional habitat used by the prairie warbler are limited on the Rich Mountain WMA. This habitat is somewhat more common on the Forest as a whole but has declined recently due to a reduction in forest management activities. However, prairie warbler populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of early successional forests. Impacts from the Rich Mountain road are limited to the area immediately adjacent to the road. Therefore no cumulative effects to prairie warblers or their habitat are expected.

Effects of Alternative 2

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the prairie warbler.

Indirect Effects - Road maintenance activities in this alternative will provide opportunities for limited wildlife habitat enhancement projects in the portion of the Rich

Mountain WMA adjacent to the road. These management activities could result in slight improvements in habitat conditions for the prairie warbler.

Cumulative Effects - Early successional habitat used by the prairie warbler are limited on the Rich Mountain WMA. This habitat is somewhat more common on the Forest as a whole but has declined recently due to a reduction in forest management activities. However, prairie warbler populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of early successional forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to prairie warblers or their habitat are expected.

Effects of Alternative 3 (Proposed Action)

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the prairie warbler.

Indirect Effects - Road maintenance activities in this alternative will provide opportunities for limited wildlife habitat enhancement projects in the portion of the Rich Mountain WMA adjacent to the road. These management activities could result in slight improvements in habitat conditions for the prairie warbler.

Cumulative Effects - Early successional habitat used by the prairie warbler are limited on the Rich Mountain WMA. This habitat is somewhat more common on the Forest as a whole but has declined recently due to a reduction in forest management activities. However, prairie warbler populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of early successional forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to prairie warblers or their habitat are expected.

Effects of Alternative 4

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the prairie warbler.

Indirect Effects - Road maintenance activities in this alternative will provide opportunities for limited wildlife habitat enhancement projects in the portion of the Rich Mountain WMA adjacent to the road. These management activities could result in slight improvements in habitat conditions for the prairie warbler.

Cumulative Effects - Early successional habitat used by the prairie warbler are limited on the Rich Mountain WMA. This habitat is somewhat more common on the Forest as a whole but has declined recently due to a reduction in forest management activities. However, prairie warbler populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of early successional forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to prairie warblers or their habitat are expected.

Effects of Alternative 5

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the prairie warbler.

Indirect Effects - Road maintenance activities in this alternative will provide opportunities for limited wildlife habitat enhancement projects in the portion of the Rich Mountain WMA adjacent to the road. These management activities could result in slight improvements in habitat conditions for the prairie warbler.

Cumulative Effects - Early successional habitat used by the prairie warbler are limited on the Rich Mountain WMA. This habitat is somewhat more common on the Forest as a whole but has declined recently due to a reduction in forest management activities. However, prairie warbler populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of early successional forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to prairie warblers or their habitat are expected.

Effects of Alternative 6

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the prairie warbler.

Indirect Effects - Road decommissioning would significantly restrict opportunities for wildlife habitat enhancement projects in the portion of the Rich Mountain WMA adjacent to the road. Therefore habitat conditions for prairie warbler are expected to be maintained at current levels.

Cumulative Effects - Early successional habitat used by the prairie warbler are limited on the Rich Mountain WMA. This habitat is somewhat more common on the Forest as a whole but has declined recently due to a reduction in forest management activities. However, prairie warbler populations are expected to increase on the Forest through the

implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of early successional forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to prairie warblers or their habitat are expected.

Ovenbird

Existing Conditions

This species was selected as a MIS to help indicate the effects of management on species associated with interior forest habitats. Forest interior birds avoid forest edges during nesting and can be sensitive to forest fragmentation. Ovenbirds are strongly associated with mature forest interior habitats (Hamel 1992, Crawford et al. 1981). They generally breed in closed canopy deciduous or mixed forests with limited understory. Bird data demonstrates that ovenbird populations have been relatively stable on the Forest. The availability of older hardwood stands on the Forest has increased over the last few decades. The majority of the Rich Mountain project area consists of large contiguous blocks of mature hardwood forests. Therefore ovenbirds are common on the Rich Mountain area due to the abundance of suitable habitat.

Effects of Alternative 1 (No Action)

Direct Effects- This alternative will perpetuate current conditions and no direct impacts to the ovenbird are expected.

Indirect Effects - This alternative will perpetuate current conditions and no indirect impacts to the ovenbird are expected.

Cumulative Effects - Interior forest habitats used by ovenbirds are abundant on the Rich Mountain WMA and Forest as a whole. Ovenbird populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of interior forest habitats. Impacts from the Rich Mountain road are limited to the area immediately adjacent to the road. Therefore no cumulative effects to ovenbirds or their habitat are expected.

Effects of Alternative 2

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the ovenbird.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and

maintenance of existing wildlife openings. However none of these activities would affect the availability of interior forest habitats. Therefore, there will be no indirect effects from this alternative on the ovenbird.

Cumulative Effects - Interior forest habitats used by ovenbirds are abundant on the Rich Mountain WMA and Forest as a whole. Ovenbird populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of interior forest habitats. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to ovenbirds or their habitat are expected.

Effects of Alternative 3 (Proposed Action)

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the ovenbird.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However none of these activities would affect the availability of interior forest habitats. Therefore, there will be no indirect effects from this alternative on the ovenbird.

Cumulative Effects - Interior forest habitats used by ovenbirds are abundant on the Rich Mountain WMA and Forest as a whole. Ovenbird populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of interior forest habitats. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to ovenbirds or their habitat are expected.

Effects of Alternative 4

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the ovenbird.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However none of these activities would affect the availability of interior forest habitats. Therefore, there will be no indirect effects from this alternative on the ovenbird.

Cumulative Effects - Interior forest habitats used by ovenbirds are abundant on the Rich Mountain WMA and Forest as a whole. Ovenbird populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of interior forest habitats. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to ovenbirds or their habitat are expected.

Effects of Alternative 5

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the ovenbird.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However none of these activities would affect the availability of interior forest habitats. Therefore, there will be no indirect effects from this alternative on the ovenbird.

Cumulative Effects - Interior forest habitats used by ovenbirds are abundant on the Rich Mountain WMA and Forest as a whole. Ovenbird populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of interior forest habitats. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to ovenbirds or their habitat are expected.

Effects of Alternative 6

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the ovenbird.

Indirect Effects - Under this alternative, the entire road would be decommissioned. This will significantly restrict opportunities for wildlife habitat enhancement projects, although limited activities still would be possible. However none of these activities would affect the availability of interior forest habitats. Therefore, there will be no indirect effects from this alternative on the ovenbird.

Cumulative Effects - Interior forest habitats used by ovenbirds are abundant on the Rich Mountain WMA and Forest as a whole. Ovenbird populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would

affect the availability of interior forest habitats. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to ovenbirds or their habitat are expected.

Acadian Flycatcher

Existing Conditions

This species was selected as a MIS to help indicate the effects of management on species associated with mature riparian forests. Habitat for the Acadian flycatcher consists of deciduous forests near streams (Hamel 1992). Preferred habitat for this species is moist bottomlands, swamps, and riparian thickets. Usually this bird builds its nest in branches directly overhanging streams. Bird survey data suggests that Acadian Flycatcher populations have been relatively stable on the Forest. Preferred riparian habitat is maintained on the Forest on all projects through implementation of riparian corridor standards and BMP's. The Acadian flycatcher is common within the riparian areas of larger streams in the Rich Mountain area.

Effects of Alternative 1 (No Action)

Direct Effects- This alternative will perpetuate current conditions and no direct impacts to the Acadian flycatcher are expected.

Indirect Effects - This alternative will perpetuate current conditions and no indirect impacts to the Acadian flycatcher are expected.

Cumulative Effects - Mature riparian forests used by Acadian flycatchers are abundant on the Rich Mountain WMA and Forest as a whole. Acadian flycatcher populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature riparian forests. Impacts from the Rich Mountain road are limited to the area immediately adjacent to the road. Therefore no cumulative effects to Acadian flycatchers or their habitat are expected.

Effects of Alternative 2

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Standards provided in the Riparian Corridor Management Prescription will be followed to ensure protection of riparian habitat conditions where the road crosses the riparian corridor. Therefore, there will be no direct effects from this alternative on the Acadian flycatcher.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and

maintenance of existing wildlife openings. However riparian corridor standard will be followed to ensure that none of these activities impact conditions in the riparian corridor. Therefore, there will be no indirect effects from this alternative on the Acadian flycatcher.

Cumulative Effects - Mature riparian forests used by the Acadian flycatcher are abundant on the Rich Mountain WMA and Forest as a whole. Acadian flycatcher populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature riparian hardwood forests. Riparian Corridor standards will be followed on all projects on the Forest to maintain desirable habitat conditions in the riparian corridor. Therefore no cumulative effects to Acadian flycatchers or their habitat are expected.

Effects of Alternative 3 (Proposed Action)

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Standards provided in the Riparian Corridor Management Prescription will be followed to ensure protection of riparian habitat conditions where the road crosses the riparian corridor. Therefore, there will be no direct effects from this alternative on the Acadian flycatcher.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However riparian corridor standard will be followed to ensure that none of these activities impact conditions in the riparian corridor. Therefore, there will be no indirect effects from this alternative on the Acadian flycatcher.

Cumulative Effects - Mature riparian forests used by the Acadian flycatcher are abundant on the Rich Mountain WMA and Forest as a whole. Acadian flycatcher populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature riparian hardwood forests. Riparian Corridor standards will be followed on all projects on the Forest to maintain desirable habitat conditions in the riparian corridor. Therefore no cumulative effects to Acadian flycatchers or their habitat are expected.

Effects of Alternative 4

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Standards provided in the Riparian Corridor Management Prescription will be followed to ensure protection of riparian habitat conditions where the road crosses the riparian

corridor. Therefore, there will be no direct effects from this alternative on the Acadian flycatcher.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However riparian corridor standard will be followed to ensure that none of these activities impact conditions in the riparian corridor. Therefore, there will be no indirect effects from this alternative on the Acadian flycatcher.

Cumulative Effects - Mature riparian forests used by the Acadian flycatcher are abundant on the Rich Mountain WMA and Forest as a whole. Acadian flycatcher populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature riparian hardwood forests. Riparian Corridor standards will be followed on all projects on the Forest to maintain desirable habitat conditions in the riparian corridor. Therefore no cumulative effects to Acadian flycatchers or their habitat are expected.

Effects of Alternative 5

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Standards provided in the Riparian Corridor Management Prescription will be followed to ensure protection of riparian habitat conditions where the road crosses the riparian corridor. Therefore, there will be no direct effects from this alternative on the Acadian flycatcher.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However riparian corridor standard will be followed to ensure that none of these activities impact conditions in the riparian corridor. Therefore, there will be no indirect effects from this alternative on the Acadian flycatcher.

Cumulative Effects - Mature riparian forests used by the Acadian flycatcher are abundant on the Rich Mountain WMA and Forest as a whole. Acadian flycatcher populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature riparian hardwood forests. Riparian Corridor standards will be followed on all projects on the Forest to maintain desirable habitat conditions in the riparian corridor. Therefore no cumulative effects to Acadian flycatchers or their habitat are expected.

Effects of Alternative 6

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Standards provided in the Riparian Corridor Management Prescription will be followed to ensure protection of riparian habitat conditions where the road crosses the riparian corridor. Therefore, there will be no direct effects from this alternative on the Acadian flycatcher.

Indirect Effects - Under this alternative, the entire road would be decommissioned. This will significantly restrict opportunities for wildlife habitat enhancement projects, although limited activities still would be possible. However riparian corridor standard will be followed to ensure that none of these activities impact conditions in the riparian corridor. Therefore, there will be no indirect effects from this alternative on the Acadian flycatcher.

Cumulative Effects - Mature riparian forests used by the Acadian flycatcher are abundant on the Rich Mountain WMA and Forest as a whole. Acadian flycatcher populations are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). There are no activities planned for the Rich Mountain WMA that would affect the availability of mature riparian hardwood forests. Riparian Corridor standards will be followed on all projects on the Forest to maintain desirable habitat conditions in the riparian corridor. Therefore no cumulative effects to Acadian flycatchers or their habitat are expected.

Scarlet Tanager

Existing Conditions

This species was selected as a MIS to help indicate the effects of management on species associated with mature upland oak communities. The scarlet tanager is most abundant in mature, upland deciduous forests (Hamel 1992). It is most common in areas with a relatively closed canopy, a dense understory with a high diversity of shrubs, and limited ground cover (NatureServe 2004). Bird survey data suggests that scarlet tanager populations have been increased on the Forest during the last decade. The majority of the Rich Mountain WMA consists of mature upland hardwood forests. Therefore scarlet tanagers are common on the Rich Mountain area due to the abundance of suitable habitat.

Effects of Alternative 1 (No Action)

Direct Effects- This alternative will perpetuate current conditions and no direct impacts to the scarlet tanager are expected.

Indirect Effects - This alternative will perpetuate current conditions and no indirect impacts to the scarlet tanager are expected.

Cumulative Effects - Mature oak used by the scarlet tanager are abundant on the Rich Mountain WMA and Forest as a whole. The availability of older oak stands on the Forest is expected to increase through the implementation of the revised Forest Plan (USDA Forest Service 2004) and as a result, scarlet tanager populations also are expected to increase. There are no activities planned for the Rich Mountain WMA that would affect the availability of mature oak forests. Impacts from the Rich Mountain road are limited to the area immediately adjacent to the road. Therefore no cumulative effects to scarlet tanagers or their habitat are expected.

Effects of Alternative 2

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the scarlet tanager.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However none of these activities would affect the availability of mature oak forests. Therefore, there will be no indirect effects from this alternative on the scarlet tanager.

Cumulative Effects - Mature oak forest used by scarlet tanagers are abundant on the Rich Mountain WMA and Forest as a whole. The availability of older oak stands on the Forest is expected to increase through the implementation of the revised Forest Plan (USDA Forest Service 2004) and as a result, scarlet tanager populations also are expected to increase. There are no activities planned for the Rich Mountain WMA that would affect the availability of mature oak forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to scarlet tanagers or their habitat are expected.

Effects of Alternative 3 (Proposed Action)

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the scarlet tanager.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However none of these activities would affect the availability of mature oak forests. Therefore, there will be no indirect effects from this alternative on the scarlet tanager.

Cumulative Effects - Mature oak forest used by scarlet tanagers are abundant on the Rich Mountain WMA and Forest as a whole. The availability of older oak stands on the Forest is expected to increase through the implementation of the revised Forest Plan (USDA

Forest Service 2004) and as a result, scarlet tanager populations also are expected to increase. There are no activities planned for the Rich Mountain WMA that would affect the availability of mature oak forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to scarlet tanagers or their habitat are expected.

Effects of Alternative 4

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the scarlet tanager.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However none of these activities would affect the availability of mature oak forests. Therefore, there will be no indirect effects from this alternative on the scarlet tanager.

Cumulative Effects - Mature oak forest used by scarlet tanagers are abundant on the Rich Mountain WMA and Forest as a whole. The availability of older oak stands on the Forest is expected to increase through the implementation of the revised Forest Plan (USDA Forest Service 2004) and as a result, scarlet tanager populations also are expected to increase. There are no activities planned for the Rich Mountain WMA that would affect the availability of mature oak forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to scarlet tanagers or their habitat are expected.

Effects of Alternative 5

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the scarlet tanager.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However none of these activities would affect the availability of mature oak forests. Therefore, there will be no indirect effects from this alternative on the scarlet tanager.

Cumulative Effects - Mature oak forest used by scarlet tanagers are abundant on the Rich Mountain WMA and Forest as a whole. The availability of older oak stands on the Forest is expected to increase through the implementation of the revised Forest Plan (USDA Forest Service 2004) and as a result, scarlet tanager populations also are expected to increase. There are no activities planned for the Rich Mountain WMA that would affect

the availability of mature oak forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to scarlet tanagers or their habitat are expected.

Effects of Alternative 6

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the scarlet tanager.

Indirect Effects - Under this alternative, the entire road would be decommissioned. This will significantly restrict opportunities for wildlife habitat enhancement projects, although limited activities still would be possible. However none of these activities would affect the availability of mature oak forests. Therefore, there will be no indirect effects from this alternative on the scarlet tanager.

Cumulative Effects - Mature oak forest used by scarlet tanagers are abundant on the Rich Mountain WMA and Forest as a whole. The availability of older oak stands on the Forest is expected to increase through the implementation of the revised Forest Plan (USDA Forest Service 2004) and as a result, scarlet tanager populations also are expected to increase. There are no activities planned for the Rich Mountain WMA that would affect the availability of mature oak forests. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to scarlet tanagers or their habitat are expected.

Pileated Woodpecker

Existing Conditions

This species was selected as a MIS to help indicate the effects of management on species that utilize snags. Habitat consists of mature (60+ years) and extensive hardwood and hardwood-pine forest (Hamel 1992). Preferred habitat is primarily deep woods, swamps, or river bottom forests. The pileated woodpecker can also be found in rather open, upland forest of mixed forest types. This bird forages and nests on and in snags, with some foraging also occurring on fallen logs and other forest debris. This species requires snags for nesting and foraging. Bird survey data suggests that pileated woodpecker populations have been relatively stable on the Forest during the last decade. Pileated woodpeckers are common in the Rich Mountain area due to the abundance of older forests.

Effects of Alternative 1 (No Action)

Direct Effects- This alternative will perpetuate current conditions and no direct impacts to the pileated woodpeckers are expected.

Indirect Effects - This alternative will perpetuate current conditions and no indirect impacts to the pileated woodpeckers are expected.

Cumulative Effects - Mature forest habitats used by pileated woodpeckers are abundant on the Rich Mountain WMA and Forest as a whole. Pileated woodpecker populations are tied to the availability of large snags, which are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). As a result, pileated woodpecker populations also are expected to increase. The revised Forest plan has several standards that ensure the retention and recruitment of snags and den trees. There are no activities planned for the Rich Mountain WMA that would affect the availability of large snags. Impacts from the Rich Mountain road are limited to the area immediately adjacent to the road. Therefore no cumulative effects to pileated woodpeckers or their habitat are expected.

Effects of Alternative 2

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the pileated woodpecker.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. Forest-wide standards will be followed that ensure the retention and recruitment of snags and therefore none of these activities will affect the future availability of snags. Therefore, there will be no indirect effects from this alternative on the pileated woodpecker.

Cumulative Effects - Snags used by pileated woodpeckers are abundant on the Rich Mountain WMA and Forest as a whole. Pileated woodpecker populations are tied to the availability of large snags, which are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). As a result, pileated woodpecker populations also are expected to increase. There are no activities planned for the Rich Mountain WMA that would affect the availability of snags. Forest-wide standards will be followed on vegetation management projects throughout the Forest to ensure the retention and recruitment of snags. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to pileated woodpeckers or their habitat are expected.

Effects of Alternative 3 (Proposed Action)

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the pileated woodpecker.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. Forest-wide standards will be followed that ensure the retention and recruitment of snags and therefore none of these activities will affect the future availability of snags. Therefore, there will be no indirect effects from this alternative on the pileated woodpecker.

Cumulative Effects - Snags used by pileated woodpeckers are abundant on the Rich Mountain WMA and Forest as a whole. Pileated woodpecker populations are tied to the availability of large snags, which are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). As a result, pileated woodpecker populations also are expected to increase. There are no activities planned for the Rich Mountain WMA that would affect the availability of snags. Forest-wide standards will be followed on vegetation management projects throughout the Forest to ensure the retention and recruitment of snags. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to pileated woodpeckers or their habitat are expected.

Effects of Alternative 4

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the pileated woodpecker.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. Forest-wide standards will be followed that ensure the retention and recruitment of snags and therefore none of these activities will affect the future availability of snags. Therefore, there will be no indirect effects from this alternative on the pileated woodpecker.

Cumulative Effects - Snags used by pileated woodpeckers are abundant on the Rich Mountain WMA and Forest as a whole. Pileated woodpecker populations are tied to the availability of large snags, which are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). As a result, pileated woodpecker populations also are expected to increase. There are no activities planned for the Rich Mountain WMA that would affect the availability of snags. Forest-wide standards will be followed on vegetation management projects throughout the Forest to ensure the retention and recruitment of snags. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to pileated woodpeckers or their habitat are expected.

Effects of Alternative 5

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the pileated woodpecker.

Indirect Effects - Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. Forest-wide standards will be followed that ensure the retention and recruitment of snags and therefore none of these activities will affect the future availability of snags. Therefore, there will be no indirect effects from this alternative on the pileated woodpecker.

Cumulative Effects - Snags used by pileated woodpeckers are abundant on the Rich Mountain WMA and Forest as a whole. Pileated woodpecker populations are tied to the availability of large snags, which are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). As a result, pileated woodpecker populations also are expected to increase. There are no activities planned for the Rich Mountain WMA that would affect the availability of snags. Forest-wide standards will be followed on vegetation management projects throughout the Forest to ensure the retention and recruitment of snags. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to pileated woodpeckers or their habitat are expected.

Effects of Alternative 6

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the pileated woodpecker.

Indirect Effects - Under this alternative, the entire road would be decommissioned. This will significantly restrict opportunities for wildlife habitat enhancement projects, although limited activities still would be possible. However forest-wide standards will be followed that ensure the retention and recruitment of snags and therefore none of these activities will affect the future availability of snags. Therefore, there will be no indirect effects from this alternative on the pileated woodpecker.

Cumulative Effects - Snags used by pileated woodpeckers are abundant on the Rich Mountain WMA and Forest as a whole. Pileated woodpecker populations are tied to the availability of large snags, which are expected to increase on the Forest through the implementation of the revised Forest Plan (USDA Forest Service 2004). As a result, pileated woodpecker populations also are expected to increase. There are no activities planned for the Rich Mountain WMA that would affect the availability of snags. Forest-

wide standards will be followed on vegetation management projects throughout the Forest to ensure the retention and recruitment of snags. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to pileated woodpeckers or their habitat are expected.

White-tailed Deer

Existing Conditions

This species was selected as a MIS to help indicate the effects of management in meeting public demand as a hunted species. The habitat capability model for the Forest shows a slight decrease in browse availability during the past 10 years (USDA Forest Service 2003). This is due to a decline in the amount of forested early successional habitat. However, white-tailed deer are very adaptable. Game harvest regulations and habitat improvement techniques—such as forest thinning, prescribed burning, and wildlife opening development—have helped create healthy deer populations throughout Georgia. Deer harvest data indicates that populations in the mountains and ridge and valley are stable to increasing with some fluctuations primarily due to differences in the annual mast crops. Piedmont harvest data shows higher overall deer densities, and State regulations have been liberalized to help reduce population numbers to within habitat capability levels. Deer populations are low to moderate on the Rich Mountain area due to limited availability of early successional habitat and high quality permanent openings.

Effects of Alternative 1 (No Action)

Direct Effects- This alternative will perpetuate current conditions and no direct impacts to white-tailed deer are expected.

Indirect Effects – Opportunities for wildlife enhancement activities will remain limited in this alternative due to the poor condition of the road. This alternative will perpetuate current conditions and no indirect impacts to white-tailed deer are expected.

Cumulative Effects - Early successional habitat and high quality permanent openings important for deer are limited on the Rich Mountain WMA. These habitats are somewhat more common on the Forest as a whole. Implementation of the revised Forest Plan is expected to provide a diversity of habitats that will benefit white-tailed deer populations on the Forest (USDA Forest Service 2004). No additional activities affecting deer habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Impacts from the Rich Mountain road are limited to the area immediately adjacent to the road. Therefore no cumulative effects to white-tailed deer or their habitat are expected.

Effects of Alternative 2

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the white-tailed deer.

Indirect Effects - Road maintenance activities in this alternative would permit the restoration of maintenance activities of existing wildlife openings by Georgia DNR personnel as well as additional opportunities for wildlife habitat enhancement projects such as prescribed burning. These management activities should result in improved habitat conditions for white-tailed deer.

Cumulative Effects - Early successional habitat and high quality permanent openings important for deer are limited on the Rich Mountain WMA. These habitats are somewhat more common on the Forest as a whole. Implementation of the revised Forest Plan is expected to provide a diversity of habitats that will benefit white-tailed deer populations on the Forest (USDA Forest Service 2004). No additional activities affecting deer habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to white-tailed deer or their habitat are expected.

Effects of Alternative 3 (Proposed Action)

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the white-tailed deer.

Indirect Effects - Road maintenance activities in this alternative would permit the restoration of maintenance activities of existing wildlife openings by Georgia DNR personnel as well as additional opportunities for wildlife habitat enhancement projects such as prescribed burning. These management activities should result in improved habitat conditions for white-tailed deer.

Cumulative Effects - Early successional habitat and high quality permanent openings important for deer are limited on the Rich Mountain WMA. These habitats are somewhat more common on the Forest as a whole. Implementation of the revised Forest Plan is expected to provide a diversity of habitats that will benefit white-tailed deer populations on the Forest (USDA Forest Service 2004). No additional activities affecting deer habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich

Mountain road. Therefore no cumulative effects to white-tailed deer or their habitat are expected.

Effects of Alternative 4

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the white-tailed deer.

Indirect Effects - Road maintenance activities in this alternative would permit the restoration of maintenance activities of existing wildlife openings by Georgia DNR personnel as well as additional opportunities for wildlife habitat enhancement projects such as prescribed burning. These management activities should result in improved habitat conditions for white-tailed deer.

Cumulative Effects - Early successional habitat and high quality permanent openings important for deer are limited on the Rich Mountain WMA. These habitats are somewhat more common on the Forest as a whole. Implementation of the revised Forest Plan is expected to provide a diversity of habitats that will benefit white-tailed deer populations on the Forest (USDA Forest Service 2004). No additional activities affecting deer habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to white-tailed deer or their habitat are expected.

Effects of Alternative 5

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the white-tailed deer.

Indirect Effects - Road maintenance activities in this alternative would permit the restoration of maintenance activities of existing wildlife openings by Georgia DNR personnel as well as additional opportunities for wildlife habitat enhancement projects such as prescribed burning. These management activities should result in improved habitat conditions for white-tailed deer.

Cumulative Effects - Early successional habitat and high quality permanent openings important for deer are limited on the Rich Mountain WMA. These habitats are somewhat more common on the Forest as a whole. Implementation of the revised Forest Plan is expected to provide a diversity of habitats that will benefit white-tailed deer populations on the Forest (USDA Forest Service 2004). No additional activities affecting deer habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain

road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to white-tailed deer or their habitat are expected.

Effects of Alternative 6

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the white-tailed deer.

Indirect Effects - Road decommissioning would eliminate the opportunity for the restoration of maintenance activities of existing wildlife openings by Georgia DNR personnel. It also will restrict opportunities for wildlife habitat enhancement projects such as prescribed burning. Therefore habitat conditions for deer are expected to be maintained at current levels.

Cumulative Effects - Early successional habitat and high quality permanent openings important for deer are limited on the Rich Mountain WMA. These habitats are somewhat more common on the Forest as a whole. Implementation of the revised Forest Plan is expected to provide a diversity of habitats that will benefit white-tailed deer populations on the Forest (USDA Forest Service 2004). No additional activities affecting deer habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore no cumulative effects to white-tailed deer or their habitat are expected.

Black Bear

Existing Conditions

This species was selected as a MIS to help indicate the effects of management in meeting public demand as a hunted species. Black bear numbers have increased and are beginning to stabilize after 20 years of growth, according to bait station survey results (USDA Forest Service 2003). Based on harvest records and bear and human encounters, state biologists have concluded that bears are nearing carrying capacity on the Chattahoochee NF. Increased acres of older hardwood stands, sustained hard mast production, and enhanced soft mast production through forest management activities—such as prescribed burning and timber harvest—have contributed to improved black bear habitat on the Forest. Current bear population are at moderate levels in the Rich Mountain area due to the abundance of older mast producing stands.

Effects of Alternative 1 (No Action)

Direct Effects- This alternative will perpetuate current conditions and no direct impacts to black bear are expected.

Indirect Effects – Opportunities for wildlife enhancement activities will remain limited in this alternative due to the poor condition of the road. This alternative will perpetuate current conditions and no indirect impacts to black bear are expected.

Cumulative Effects - Mature hard mast producing stands that are important to bears are common on the Rich Mountain WMA as well as the Forest as a whole. However, early successional forest that are important sources of soft mast are much more limited, especially on the Rich Mountain WMA. Implementation of the revised Forest Plan is expected to provide a diversity of habitats that will benefit black bear populations on the Forest (USDA Forest Service 2004).

No additional activities affecting bear habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Impacts from the Rich Mountain road are limited to the area immediately adjacent to the road. Therefore no cumulative effects to black bear or their habitat are expected.

Effects of Alternative 2

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the black bear.

Indirect Effects - Road maintenance activities in this alternative would permit the restoration of maintenance activities of existing wildlife openings by Georgia DNR personnel as well as additional opportunities for wildlife habitat enhancement projects such as prescribed burning. These management activities should result in improved habitat conditions for bears.

Cumulative Effects - Mature hard mast producing stands that are important to bears are common on the Rich Mountain WMA as well as the Forest as a whole. However, early successional forest that are important sources of soft mast are much more limited, especially on the Rich Mountain WMA. Implementation of the revised Forest Plan is expected to provide a diversity of habitats that will benefit black bear populations on the Forest (USDA Forest Service 2004).

No additional activities affecting bear habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Impacts from the Rich Mountain road are limited to the area immediately

adjacent to the road. Therefore no cumulative effects to black bear or their habitat are expected.

Effects of Alternative 3 (Proposed Action)

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the black bear.

Indirect Effects - Road maintenance activities in this alternative would permit the restoration of maintenance activities of existing wildlife openings by Georgia DNR personnel as well as additional opportunities for wildlife habitat enhancement projects such as prescribed burning. These management activities should result in improved habitat conditions for bears.

Cumulative Effects - Mature hard mast producing stands that are important to bears are common on the Rich Mountain WMA as well as the Forest as a whole. However, early successional forest that are important sources of soft mast are much more limited, especially on the Rich Mountain WMA. Implementation of the revised Forest Plan is expected to provide a diversity of habitats that will benefit black bear populations on the Forest (USDA Forest Service 2004).

No additional activities affecting bear habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Impacts from the Rich Mountain road are limited to the area immediately adjacent to the road. Therefore no cumulative effects to black bear or their habitat are expected.

Effects of Alternative 4

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the black bear.

Indirect Effects - Road maintenance activities in this alternative would permit the restoration of maintenance activities of existing wildlife openings by Georgia DNR personnel as well as additional opportunities for wildlife habitat enhancement projects such as prescribed burning. These management activities should result in improved habitat conditions for bears.

Cumulative Effects - Mature hard mast producing stands that are important to bears are common on the Rich Mountain WMA as well as the Forest as a whole. However, early successional forest that are important sources of soft mast are much more limited, especially on the Rich Mountain WMA. Implementation of the revised Forest Plan is

expected to provide a diversity of habitats that will benefit black bear populations on the Forest (USDA Forest Service 2004).

No additional activities affecting bear habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Impacts from the Rich Mountain road are limited to the area immediately adjacent to the road. Therefore no cumulative effects to black bear or their habitat are expected.

Effects of Alternative 5

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the black bear.

Indirect Effects - Road maintenance activities in this alternative would permit the restoration of maintenance activities of existing wildlife openings by Georgia DNR personnel as well as additional opportunities for wildlife habitat enhancement projects such as prescribed burning. These management activities should result in improved habitat conditions for bears.

Cumulative Effects - Mature hard mast producing stands that are important to bears are common on the Rich Mountain WMA as well as the Forest as a whole. However, early successional forest that are important sources of soft mast are much more limited, especially on the Rich Mountain WMA. Implementation of the revised Forest Plan is expected to provide a diversity of habitats that will benefit black bear populations on the Forest (USDA Forest Service 2004).

No additional activities affecting bear habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Impacts from the Rich Mountain road are limited to the area immediately adjacent to the road. Therefore no cumulative effects to black bear or their habitat are expected.

Effects of Alternative 6

Direct Effects- Actions proposed in this alternative are limited in scope and would only involve the area in or immediately adjacent to the existing Rich Mountain road. Therefore, there will be no direct effects from this alternative on the black bear.

Indirect Effects - Road decommissioning would eliminate the opportunity for the restoration of maintenance activities of existing wildlife openings by Georgia DNR personnel. It also will restrict opportunities for wildlife habitat enhancement projects

such as prescribed burning. Therefore habitat conditions for bears are expected to be maintained at current levels.

Cumulative Effects - Mature hard mast producing stands that are important to bears are common on the Rich Mountain WMA as well as the Forest as a whole. However, early successional forest that are important sources of soft mast are much more limited, especially on the Rich Mountain WMA. Implementation of the revised Forest Plan is expected to provide a diversity of habitats that will benefit black bear populations on the Forest (USDA Forest Service 2004).

No additional activities affecting bear habitat are planned in the portion of the Rich Mountain WMA accessed by the Rich Mountain road. However, continued routine maintenance of several existing wildlife openings in other portions of the WMA will continue. Impacts from the Rich Mountain road are limited to the area immediately adjacent to the road. Therefore no cumulative effects to black bear or their habitat are expected.

Table 9 below summarizes the effects of the alternatives on the Management Indicator Species.

Table 9 – Effects of Alternatives on Project Management Indicator Species

Management Indicator Species	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6
Pine Warbler	M	M	M	M	M	M
Chestnut-sided Warbler	M	I	I	I	I	M
Hooded Warbler	M	M	M	M	M	M
Prairie Warbler	M	I	I	I	I	M
Ovenbird	M	M	M	M	M	M
Acadian Flycatcher	M	M	M	M	M	M
Scarlet Tanager	M	M	M	M	M	M
Pileated Woodpecker	M	M	M	M	M	M
White-tailed Deer	M	I	I	I	I	M
Black Bear	M	I	I	I	I	M

I=Increase Habitat Capability, D=Decrease Habitat Capability, M=Maintain Habitat Capability.

Element – Fisheries

Measure- Effects on fisheries populations and habitat

Bounds of Analysis – Spatial: Potential impacts to populations and habitat conditions in the watersheds immediately down stream of the Rich Mountain road. **Temporal:** The period of time soil disturbing activities could occur, up to the point in time when these effects cease to exist (5 years or less) and more long term impacts (10-15 years) from potential road management alternatives.

Existing Conditions

The Rich Mountain road crosses the headwaters of several trout streams. This includes Stanley Creek, Wolf Creek, Butler Creek, Roger Laurel Branch, Big Creek, Little Rock Creek, Turniptown Creek, and Briar Creek. Rainbow trout are the dominant game fish in most streams. Big Creek contains a small, remnant population of brook trout sympatric with rainbow trout. Most of these smaller streams have simple fish communities. Often sculpin are the only fish species other than trout and portions of the upper headwaters may be fishless. These small headwater streams are tributaries of the Toccoa and Ellijay Rivers. These larger river systems contain a much more diverse fishery including red-eye bass and a number of darters, shiners, and other non-game fishes.

As a result of inadequate maintenance, portions of the Rich Mountain road have eroded and are contributing sediment to some of these streams. High gradient streams such as those found in the project area can handle some sediment without negatively affecting aquatic communities. Bedloads are naturally moved in streams, particularly during high flows. However, high sediment loads have the potential to adversely affect water quality and aquatic species. It can limit reproduction of fish by degrading spawning habitat. It also can inhibit aquatic insect populations.

Effects of Alternative 1 (No Action)

Direct Effects – The ongoing erosion of the roadbed will continue under this alternative. As a result, current water quality impacts will persist. This could negatively impact the existing trout fishery as well as other aquatic species.

Indirect Effects – Because no road maintenance activities will occur under this alternative, road conditions will continue to deteriorate. As a result, additional impacts to aquatic species are possible.

Cumulative Effects – No additional actions are planned in the portions of the watersheds downstream of the Rich Mountain Road. Forest-wide water quality standards, Riparian Corridor (MRx 11) standards, as well as guidelines from the Manual for Erosion and Sediment Control in Georgia (2000) and Georgia's Best Management Practices for Forestry (1999) will be followed all future projects on the Forest to maintain water quality and prevent adverse impacts to aquatic species. In addition, ongoing and future watershed improvement projects throughout the Forest will be designed and implemented to reduce existing water quality impacts.

Effects of Alternative 2

Direct Effects – Road reconstruction activities proposed in this alternative will correct some of the ongoing watershed impacts from the Rich Mountain road. While some short-term impacts could occur during the period of time the roadwork is being completed, these impacts will be minimized through the use of appropriate erosion control measures such as the use of silt fences, hay bales, brush barriers, and prompt revegetation of

exposed soils. The repair and reconstruction of the Rich Mountain road will result in improved water quality conditions for the aquatic species found in these watersheds.

Indirect Effects – Road reconstruction activities in this alternative will correct many of the ongoing watershed impacts from the Rich Mountain road. This should result in improved water quality conditions for trout and other aquatic species. However since the entire road will remain open year-round, some water quality impacts are expected to continue.

Cumulative Effects - No additional actions are planned in the portions of the watersheds downstream of the Rich Mountain Road. Forest-wide water quality standards, Riparian Corridor (MRx 11) standards, as well as guidelines from the Manual for Erosion and Sediment Control in Georgia (2000) and Georgia's Best Management Practices for Forestry (1999) will be followed all future projects on the Forest to maintain water quality and prevent adverse impacts to aquatic species. In addition, ongoing and future watershed improvement projects throughout the Forest will be designed and implemented to reduce existing water quality impacts.

Effects of Alternative 3 (Proposed Action)

Direct Effects – Reconstruction and decommissioning activities proposed in this alternative will correct the ongoing watershed impacts from the Rich Mountain road. While some short-term impacts could occur during the period of time the roadwork is being completed, these impacts will be minimized through the use of appropriate erosion control measures such as the use of silt fences, hay bales, brush barriers, and prompt revegetation of exposed soils. The repair and reconstruction of the Rich Mountain road will result in improved water quality conditions for the aquatic species found in these watersheds.

Indirect Effects – The road maintenance activities in this alternative will correct the ongoing watershed impacts from the Rich Mountain road. Segment A will be decommissioned and closed to vehicular traffic. Restoration of the existing gullies and reestablishment of vegetative cover on the road should minimize any water quality impacts from this portion of the road. Although the remainder of road will be open to vehicular traffic, it will be closed during the winter months when freeze/thaw events can contribute to the deterioration of the road. These actions will result in improved conditions for trout and other aquatic species.

Cumulative Effects - No additional actions are planned in the portions of the watersheds downstream of the Rich Mountain Road. Forest-wide water quality standards, Riparian Corridor (MRx 11) standards, as well as guidelines from the Manual for Erosion and Sediment Control in Georgia (2000) and Georgia's Best Management Practices for Forestry (1999) will be followed all future projects on the Forest to maintain water quality and prevent adverse impacts to aquatic species. In addition, ongoing and future watershed improvement projects throughout the Forest will be designed and implemented to reduce existing water quality impacts.

Effects of Alternative 4

Direct Effects – The effects of this Alternative will be similar to Alternative 3. Reconstruction and decommissioning activities proposed in this alternative will correct the ongoing watershed impacts from the Rich Mountain road. While some short-term impacts could occur during the period of time the roadwork is being completed, these impacts will be minimized through the use of appropriate erosion control measures such as the use of silt fences, hay bales, brush barriers, and prompt revegetation of exposed soils. The repair and reconstruction of the Rich Mountain road will result in improved water quality conditions for the aquatic species found in these watersheds.

Indirect Effects - The road maintenance activities in this alternative will correct the ongoing watershed impacts from the Rich Mountain road. Segment A will be decommissioned and closed to vehicular traffic. Restoration of the existing gullies and reestablishment of vegetative cover on the road should minimize any water quality impacts from this portion of the road. Segment B be reconstructed and will remain closed year-round to motor vehicles, except for administrative use. Although the remainder of road will be open to vehicular traffic, it will be closed during the winter months when freeze/thaw events can contribute to the deterioration of the road. These actions will result in improved conditions for trout and other aquatic species.

Cumulative Effects - No additional actions are planned in the portions of the watersheds downstream of the Rich Mountain Road. Forest-wide water quality standards, Riparian Corridor (MRx 11) standards, as well as guidelines from the Manual for Erosion and Sediment Control in Georgia (2000) and Georgia's Best Management Practices for Forestry (1999) will be followed all future projects on the Forest to maintain water quality and prevent adverse impacts to aquatic species. In addition, ongoing and future watershed improvement projects throughout the Forest will be designed and implemented to reduce existing water quality impacts.

Effects of Alternative 5

Direct Effects – Road reconstruction activities proposed in this alternative will correct the ongoing watershed impacts from the Rich Mountain road. While some short-term impacts could occur during the period of time the roadwork is being completed, these impacts will be minimized through the use of appropriate erosion control measures such as the use of silt fences, hay bales, brush barriers, and prompt revegetation of exposed soils. The repair and reconstruction of the Rich Mountain road will result in improved water quality conditions for the aquatic species found in these watersheds.

Indirect Effects - The road maintenance activities in this alternative will correct the ongoing watershed impacts from the Rich Mountain road. The entire road will remain closed year-round to motor vehicles, except for administrative use. Limiting vehicular use of the road will minimize and water quality impacts from the road. This will result in improved conditions for trout and other aquatic species.

Cumulative Effects - No additional actions are planned in the portions of the watersheds downstream of the Rich Mountain Road. Forest-wide water quality standards, Riparian Corridor (MRx 11) standards, as well as guidelines from the Manual for Erosion and Sediment Control in Georgia (2000) and Georgia's Best Management Practices for Forestry (1999) will be followed all future projects on the Forest to maintain water quality and prevent adverse impacts to aquatic species. In addition, ongoing and future watershed improvement projects throughout the Forest will be designed and implemented to reduce existing water quality impacts.

Effects of Alternative 6

Direct Effects – Road decommissioning activities proposed in this alternative will correct the ongoing watershed impacts from the Rich Mountain road. While some short-term impacts could occur during the period of time the roadwork is being completed, these impacts will be minimized through the use of appropriate erosion control measures such as the use of silt fences, hay bales, brush barriers, and prompt revegetation of exposed soils. The decommissioning of the Rich Mountain road will result in improved water quality conditions for the aquatic species found in these watersheds.

Indirect Effects – The entire road will be decommissioned and closed to vehicular traffic under this alternative. Restoration of the existing gullies and reestablishment of vegetative cover on the road should minimize any water quality impacts from the road. This will result in improved conditions for trout and other aquatic species.

Cumulative Effects - No additional actions are planned in the portions of the watersheds downstream of the Rich Mountain Road. Forest-wide water quality standards, Riparian Corridor (MRx 11) standards, as well as guidelines from the Manual for Erosion and Sediment Control in Georgia (2000) and Georgia's Best Management Practices for Forestry (1999) will be followed all future projects on the Forest to maintain water quality and prevent adverse impacts to aquatic species. In addition, ongoing and future watershed improvement projects throughout the Forest will be designed and implemented to reduce existing water quality impacts.

Proposed, Endangered, Threatened, and Sensitive (PETS) and Locally Rare Species

There are 25 federally listed proposed, endangered, or threatened (PET), 100 sensitive (S), and 136 Locally Rare (LR) species known to occur or with potential to occur on the Chattahoochee-Oconee NFs. Of these, 185 are terrestrial species and 76 are aquatic species. PETS and LR species addressed here were chosen due to known occurrences and/or presence of habitat for the species in the project area. This was determined by: (1) consulting 13 years of Forest Service plant inventory records, (2) consulting Georgia Natural Heritage Program (GNHP) records, (3) consulting University of Georgia (UGA), Forest Service, and Georgia Department of Natural Resources (GADNR) aquatic

inventory records, (4) reviewing U.S. Fish and Wildlife Service county lists for potential species in Gilmer County, (5) ongoing discussions with GNHP, Forest Service, and other agency biologists, and (6) various scientific references such as technical manuals, herbarium records, NatureServe information, and others.

Element - Terrestrial PETS and Locally Rare Species

Measure- Effects on populations and habitat of terrestrial PETS and Locally Rare species

Bounds of Analysis – Spatial: Potential impacts to populations and habitat conditions immediately adjacent to the Rich Mountain Road and within the Rich Mountain WMA.

Temporal: The period of road treatment activities could occur (1-2 years), and more long-term impacts (10-15 years) from potential road management alternatives.

Existing Conditions

Tables 10 and 11 respectively list the PETS and Locally Rare Species known or with potential to occur in the Rich Mountain area. Plant inventories for the Rich Mountain project area were completed in August and September 2003. The only PETS or LR plant species found were starflower (*Trientalis borealis*) and horse gentian (*Triosteum auranthiacum*). Both are Locally Rare species. A second plant inventory was completed in May 2004. The primary purpose of this spring inventory was to survey for species such as sweet white trillium (*Trillium simile*) that would not have been readily identifiable during the summer survey. No additional PETS plants were found during this spring inventory.

Several other terrestrial Sensitive and Locally Rare species also have the potential to occur in the Rich Mountain project area due to their general habitat requirements. This includes Diana Fritillary (*Speyeria diana*), Rafinesque's Big-Eared Bat (*Corynorhinus rafinesquii*), New England Cottontail (*Sylvilagus transitionalis*), Star-nosed mole (*Condylura cristata*), Coal Skink (*Eumeces anthracinus*), and Northern Pine Snake (*Pituophis melanoleucus*). Although potential habitat is present for these species in the Rich Mountain area, there are no known locations for any of these species and the area does not contain any specific habitat required by these species.

Table 10. PETS Species known to occur or with potential to occur in the Rich Mountain Project Area.

Common Name	Scientific Name	Status
<i>Terrestrial Species</i>		
Diana Fritillary	<i>Speyeria diana</i>	S
Rafinesque's Big-Eared Bat	<i>Corynorhinus rafinesquii</i>	S
<i>Aquatic Species</i>		

Goldline Darter	<i>Percina aurolineata</i>	T
Holiday Darter	<i>Etheostoma brevirostrum</i>	S
Wounded Darter	<i>Etheostoma vulneratum</i>	S
Mountain Brook Lamprey	<i>Ichthyomyzon greeleyi</i>	S
Olive Darter	<i>Etheostoma squamata</i>	S
Appalachian Snaketail	<i>Ophiogomphus incurvatus</i>	S
Margarita River Skimmer	<i>Macromia margarita</i>	S
Georgia Beloneurian Stonefly	<i>Beloneuria georgiana</i>	S
Edmund's Snaketail	<i>Ophiogomphus edmunds</i>	S

Table 11. Locally Rare Species known to occur or with potential to occur in the Rich Mountain Project Area.

Common Name	Scientific Name	Status
<i>Terrestrial Species</i>		
Starflower	<i>Trientalis borealis</i>	LR
Horse Gentian	<i>Triosteum aurantiacum</i>	LR
New England Cottontail	<i>Sylvilagus transitionalis</i>	LR
Star-nosed mole	<i>Condylura cristata</i>	LR
Coal Skink	<i>Eumeces anthracinus</i>	LR
Northern Pine Snake	<i>Pituophis melanoleucus melanoleucus</i>	LR
<i>Aquatic Species</i>		
Blotched Chub	<i>Erimystax insignis</i>	LR
Bigeye Chub	<i>Hybopsis amblops</i>	LR
Whitetail Shiner	<i>Cyprinella galactura</i>	LR
Tennessee Shiner	<i>Notropis leuciodus</i>	LR
River Redhorse	<i>Moxostoma carinatum</i>	LR
Bronze Darter	<i>Percina palmaris</i>	LR

Redline Darter	<i>Etheostoma rufileatum</i>	LR
Banded Darter	<i>Etheostoma zonale</i>	LR
Tangerine Darter	<i>Etheostoma aurantiaca</i>	LR
Coosa Darter	<i>Etheostoma coosae</i>	LR
Rainbow Shiner	<i>Notropis chrosomus</i>	LR
Hellbender	<i>Cryptobranchus alleghaniensis</i>	LR

Effects of Alternative 1 (No Action)

Direct Effects – No maintenance activities will occur on the Rich Mountain road under this alternative. This alternative will perpetuate current conditions and no direct impacts to the terrestrial PETS and Locally Rare species are expected.

Indirect Effects – Continued unregulated use of the Rich Mountain road could result in additional off-road vehicle use in the area. Off-road vehicle use could result in negative impacts to PETS and Locally Rare species, particularly those rare plants found adjacent to the Rich Mountain road.

Cumulative Effects - There are no additional actions planned in the vicinity of the Rich Mountain road that would adversely affect terrestrial PETS or Locally Rare species. Surveys have been and continue to be conducted in portions of the Forest to determine presence and distribution of various small mammals, birds, amphibians and reptiles, aquatic species, and PETS and Locally Rare plants. The Georgia National Heritage Program (GNHP) records are checked for known occurrences of PETS and Locally Rare species in project areas, and close contact is maintained between the GNHP biologists and Forest Service biologists for sharing of new information. Forest Service records and other agencies' biologists and records (in addition to GNHP) are consulted for occurrences.

Future management activities and project locations will be analyzed utilizing any new information available on PETS and Locally Rare species. Effects to Federally listed species will be avoided. For Sensitive and Locally Rare species, mitigating measures will be implemented where needed to maintain habitat for these species on the Forest and to prevent future listing under the Endangered Species Act.

Effects of Alternative 2

Direct Effects – Under this alternative, some limited maintenance activities would occur on the Rich Mountain road. Activities would only involve the area in or immediately adjacent to the existing roadbed. The known locations of starflower and horse gentian will be protected from disturbance. No ground disturbance will occur outside of the exiting roadbed in the portion of the road where these plants occur. There are no known locations for any other terrestrial PETS or Locally Rare species in the area adjacent to the road and the area does not contain any specific habitat required by these species. Given

the limited scope of the proposed activities, there will be no direct effect to terrestrial PETS and Locally Rare species.

Indirect Effects – Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However any activity proposed would be designed to prevent negative impacts to terrestrial PETS and Locally Rare species. Improved road conditions will facilitate improved control of off-road vehicle use, minimizing potential impacts to rare plants. Therefore, there will be no indirect effects from this alternative to terrestrial PETS and Locally Rare species.

Cumulative Effects - There are no additional actions planned in the vicinity of the Rich Mountain road that would adversely affect terrestrial PETS or Locally Rare species. Surveys have been and continue to be conducted in portions of the Forest to determine presence and distribution of various small mammals, birds, amphibians and reptiles, aquatic species, and PETS and Locally Rare plants. The Georgia National Heritage Program (GNHP) records are checked for known occurrences of PETS and Locally Rare species in project areas, and close contact is maintained between the GNHP biologists and Forest Service biologists for sharing of new information. Forest Service records and other agencies' biologists and records (in addition to GNHP) are consulted for occurrences.

Future management activities and project locations will be analyzed utilizing any new information available on PETS and Locally Rare species. Effects to Federally listed species will be avoided. For Sensitive and Locally Rare species, mitigating measures will be implemented where needed to maintain habitat for these species on the Forest and to prevent future listing under the Endangered Species Act.

Effects of Alternative 3 (Proposed Action)

Direct Effects – Under this alternative, substantial maintenance activities would occur on the Rich Mountain road. In addition, the western 1.3 miles of the road (Segment A) would be decommissioned. However, activities would be confined to the area in or immediately adjacent to the existing roadbed. The known locations of starflower and horse gentian will be protected from disturbance. No ground disturbance will occur outside of the exiting roadbed in the portion of the road where these plants occur. There are no known locations for any other terrestrial PETS or Locally Rare species in the area adjacent to the road and the area does not contain any specific habitat required by these species. Given the limited scope of the proposed activities, there will be no effect to terrestrial PETS and Locally Rare species.

Indirect Effects – Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However any activity proposed would be designed to prevent negative impacts to terrestrial PETS and Locally Rare species. Improved road conditions and seasonal closure will facilitate improved control of off-

road vehicle use, minimizing potential impacts to rare plants. Therefore, there will be no indirect effects from this alternative to terrestrial PETS and Locally Rare species.

Cumulative Effects - There are no additional actions planned in the vicinity of the Rich Mountain road that would adversely affect terrestrial PETS or Locally Rare species. Surveys have been and continue to be conducted in portions of the Forest to determine presence and distribution of various small mammals, birds, amphibians and reptiles, aquatic species, and PETS and Locally Rare plants. The Georgia National Heritage Program (GNHP) records are checked for known occurrences of PETS and Locally Rare species in project areas, and close contact is maintained between the GNHP biologists and Forest Service biologists for sharing of new information. Forest Service records and other agencies' biologists and records (in addition to GNHP) are consulted for occurrences.

Future management activities and project locations will be analyzed utilizing any new information available on PETS and Locally Rare species. Effects to Federally listed species will be avoided. For Sensitive and Locally Rare species, mitigating measures will be implemented where needed to maintain habitat for these species on the Forest and to prevent future listing under the Endangered Species Act.

Effects of Alternative 4

Direct Effects – Effects of this alternative would be similar to Alternative 3. Under this alternative, substantial maintenance activities would occur on the Rich Mountain road. In addition, the western 1.3 miles of the road (Segment A) would be decommissioned. The adjacent 1.9 miles of road (Segment B) would be limited to administrative access only. However, activities would be confined to the area in or immediately adjacent to the existing roadbed. The known locations of starflower and horse gentian will be protected from disturbance. No ground disturbance will occur outside of the exiting roadbed in the portion of the road where these plants occur. There are no known locations for any other terrestrial PETS or Locally Rare species in the area adjacent to the road and the area does not contain any specific habitat required by these species. Given the limited scope of the proposed activities, there will be no effect to terrestrial PETS and Locally Rare species.

Indirect Effects – Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However any activity proposed would be designed to prevent negative impacts to terrestrial PETS and Locally Rare species. Improved road conditions, administrative, and seasonal closure will facilitate improved control of off-road vehicle use, minimizing potential impacts to rare plants. Therefore, there will be no indirect effects from this alternative to terrestrial PETS and Locally Rare species.

Cumulative Effects - There are no additional actions planned in the vicinity of the Rich Mountain road that would adversely affect terrestrial PETS or Locally Rare species. Surveys have been and continue to be conducted in portions of the Forest to determine presence and distribution of various small mammals, birds, amphibians and reptiles, aquatic

species, and PETS and Locally Rare plants. The Georgia National Heritage Program (GNHP) records are checked for known occurrences of PETS and Locally Rare species in project areas, and close contact is maintained between the GNHP biologists and Forest Service biologists for sharing of new information. Forest Service records and other agencies' biologists and records (in addition to GNHP) are consulted for occurrences.

Future management activities and project locations will be analyzed utilizing any new information available on PETS and Locally Rare species. Effects to Federally listed species will be avoided. For Sensitive and Locally Rare species, mitigating measures will be implemented where needed to maintain habitat for these species on the Forest and to prevent future listing under the Endangered Species Act.

Effects of Alternative 5

Direct Effects – Under this alternative, the entire Rich Mountain road would be closed and only administrative use would be allowed. Only minimal, custodial maintenance activities would occur, primarily for resources protection. As with the other alternatives, activities would be confined to the area in or immediately adjacent to the existing roadbed. The known locations of starflower and horse gentian will be protected from disturbance. No ground disturbance will occur outside of the exiting roadbed in the portion of the road where these plants occur. There are no known locations for any other terrestrial PETS or Locally Rare species in the area adjacent to the road and the area does not contain any specific habitat required by these species. Given the limited scope of the proposed activities, there will be no effect to terrestrial PETS and Locally Rare species.

Indirect Effects – Under this alternative, improved road conditions would increase opportunities for wildlife habitat enhancement activities such as prescribed burning and maintenance of existing wildlife openings. However any activity proposed would be designed to prevent negative impacts to terrestrial PETS and Locally Rare species. Improved road conditions and year-round administrative closure will facilitate improved control of off-road vehicle use, minimizing potential impacts to rare plants. Therefore, there will be no indirect effects from this alternative to terrestrial PETS and Locally Rare species.

Cumulative Effects - There are no additional actions planned in the vicinity of the Rich Mountain road that would adversely affect terrestrial PETS or Locally Rare species. Surveys have been and continue to be conducted in portions of the Forest to determine presence and distribution of various small mammals, birds, amphibians and reptiles, aquatic species, and PETS and Locally Rare plants. The Georgia National Heritage Program (GNHP) records are checked for known occurrences of PETS and Locally Rare species in project areas, and close contact is maintained between the GNHP biologists and Forest Service biologists for sharing of new information. Forest Service records and other agencies' biologists and records (in addition to GNHP) are consulted for occurrences.

Future management activities and project locations will be analyzed utilizing any new information available on PETS and Locally Rare species. Effects to Federally listed

species will be avoided. For Sensitive and Locally Rare species, mitigating measures will be implemented where needed to maintain habitat for these species on the Forest and to prevent future listing under the Endangered Species Act.

Effects of Alternative 6

Direct Effects – Under this alternative, the entire Rich Mountain road would be decommissioned and revegetated. As with the other alternatives, activities would be confined to the area in or immediately adjacent to the existing roadbed. The known locations of starflower and horse gentian will be protected from disturbance. No ground disturbance will occur outside of the exiting roadbed in the portion of the road where these plants occur. There are no known locations for any other terrestrial PETS or Locally Rare species in the area adjacent to the road and the area does not contain any specific habitat required by these species. Given the limited scope of the proposed activities, there will be no effect to terrestrial PETS and Locally Rare species.

Indirect Effects – Under this alternative, the entire road would be decommissioned. This will significantly restrict opportunities for wildlife habitat enhancement projects, although limited activities still would be possible. However any activity proposed would be designed to prevent negative impacts to terrestrial PETS and Locally Rare species. Decommissioning of the entire road should eliminate off-road vehicle use, minimizing potential impacts to rare plants. Therefore, there will be no indirect effects from this alternative to terrestrial PETS and Locally Rare species.

Cumulative Effects - There are no additional actions planned in the vicinity of the Rich Mountain road that would adversely affect terrestrial PETS or Locally Rare species. Surveys have been and continue to be conducted in portions of the Forest to determine presence and distribution of various small mammals, birds, amphibians and reptiles, aquatic species, and PETS and Locally Rare plants. The Georgia National Heritage Program (GNHP) records are checked for known occurrences of PETS and Locally Rare species in project areas, and close contact is maintained between the GNHP biologists and Forest Service biologists for sharing of new information. Forest Service records and other agencies' biologists and records (in addition to GNHP) are consulted for occurrences.

Future management activities and project locations will be analyzed utilizing any new information available on PETS and Locally Rare species. Effects to Federally listed species will be avoided. For Sensitive and Locally Rare species, mitigating measures will be implemented where needed to maintain habitat for these species on the Forest and to prevent future listing under the Endangered Species Act.

Element - Aquatic PETS and Locally Rare Species

Measure- Effects on populations and habitat of aquatic PETS and Locally Rare species
Bounds of Analysis – Spatial: Potential impacts to populations and habitat conditions watersheds down stream of the Rich Mountain road. **Temporal:** The period of time soil disturbing activities could occur, up to the point in time when these effects cease to exist

(5 years or less) as well as more long term impacts (10-15 years) from potential road management alternatives.

Existing Conditions

The Rich Mountain Road lies within the Ellijay and Toccoa River Watersheds. There are a number of PETS and Locally rare aquatic species within these watersheds, downstream of the road (Tables 10 and 11). Only one federally listed species, the goldline darter (*Percina aurolineata*) is known from these watersheds. It is historically known from the Ellijay River, approximately 2 miles downstream of the Briar Creek tributary crossing on the Rich Mountain road. Most of these species occur in the main stem rivers and larger tributaries in these watersheds well down stream of the Rich Mountain road and are not known from the headwater streams in the project vicinity. The only aquatic PETS or Locally Rare species with potential to occur in the small headwater streams influenced by the Rich Mountain road are several dragonflies including the Appalachian Snaketail (*Ophiogomphus incurvatus*), Margarita River Skimmer (*Macromia margarita*), and Edmund's Snaketail (*Ophiogomphus edmundo*), and the Georgia Beloneurian Stonefly (*Beloneuria georgiana*).

Effects of Alternative 1 (No Action)

Direct Effects – The ongoing erosion of the roadbed will continue under this alternative. As a result, current water quality impacts will persist. This could negatively impact the aquatic PETS and Locally Rare species that occur downstream of the Rich Mountain road. The species mostly likely to be directly affected by the ongoing sedimentation are those species of dragonflies and the stonefly discussed above that potentially occur in the headwater portions of the streams. Because most of the other PETS and Locally Rare species occur in the main stem rivers and larger tributaries well downstream of the Rich Mountain road, potential direct impacts from the on-going sedimentation are much more limited. This includes the Federally Endangered goldline darter, which occurs in the Ellijay River mainstem, well downstream of the project.

Indirect Effects – Because no road maintenance activities will occur under this alternative, road conditions will continue to deteriorate. As a result, additional impacts to aquatic PETS and Locally Rare species that occur downstream of the road are possible.

Cumulative Effects - No additional actions are planned in the portions of the watersheds downstream of the Rich Mountain Road. Forest-wide water quality standards, Riparian Corridor (MRx 11) standards, as well as guidelines from the Manual for Erosion and Sediment Control in Georgia (2000) and Georgia's Best Management Practices for Forestry (1999) will be followed all future projects on the Forest to maintain water quality and prevent adverse impacts to aquatic species. In addition, ongoing and future watershed improvement projects throughout the Forest will be designed and implemented to reduce existing water quality impacts.

Effects of Alternative 2

Direct Effects – Road reconstruction activities proposed in this alternative will correct some of the ongoing watershed impacts from the Rich Mountain road. While some short-term impacts could occur during the period of time the roadwork is being completed, these impacts will be minimized through the use of appropriate erosion control measures such as the use of silt fences, hay bales, brush barriers, and prompt revegetation of exposed soils. The repair and reconstruction of the Rich Mountain road will result in improved water quality conditions for the aquatic PETS and Locally Rare species that occur downstream of the road. The species mostly likely to benefit from these actions are those species of dragonflies and the stonefly discussed above that potentially occur in the headwater portions of the streams. Because most of the other PETS and Locally Rare species occur in the main stem rivers and larger tributaries well downstream of the Rich Mountain road, potential benefits from a reduction in sedimentation to these species are likely to be much more limited. This includes the Federally Endangered goldline darter, which occurs in the Ellijay River mainstem, well downstream of the project.

Indirect Effects – Road reconstruction activities in this alternative will correct many of the ongoing watershed impacts from the Rich Mountain road. This should result in improved water quality conditions for aquatic PETS and Locally Rare species that occur downstream of the road. However since the entire road will remain open year-round, some water quality impacts are expected to continue.

Cumulative Effects - No additional actions are planned in the portions of the watersheds downstream of the Rich Mountain Road. Forest-wide water quality standards, Riparian Corridor (MRx 11) standards, as well as guidelines from the Manual for Erosion and Sediment Control in Georgia (2000) and Georgia's Best Management Practices for Forestry (1999) will be followed all future projects on the Forest to maintain water quality and prevent adverse impacts to aquatic species. In addition, ongoing and future watershed improvement projects throughout the Forest will be designed and implemented to reduce existing water quality impacts.

Effects of Alternative 3 (Proposed Action)

Direct Effects – Reconstruction and decommissioning activities proposed in this alternative will correct the ongoing watershed impacts from the Rich Mountain road. The decommissioning and revegetation of the western 1.3 miles of the road (Segment A) will greatly reduce impacts in this portion of the watershed. Reconstruction activities on the remainder of the road will reestablish proper drainage structures and improve the condition of existing stream crossings. While some short-term impacts could occur during the period of time the roadwork is being completed, these impacts will be minimized through the use of appropriate erosion control measures such as the use of silt fences, hay bales, brush barriers, and prompt revegetation of exposed soils. The repair and reconstruction of the Rich Mountain road will result in improved water quality conditions for the aquatic PETS and Locally Rare species that occur downstream of the road. The species mostly likely to benefit from these actions are those species of

dragonflies and the stonefly discussed above that potentially occur in the headwater portions of the streams. Because most of the other PETS and Locally Rare species occur in the main stem rivers and larger tributaries well downstream of the Rich Mountain road, potential benefits from a reduction in sedimentation to these species are likely to be much more limited. This includes the Federally Endangered goldline darter, which occurs in the Ellijay River mainstem, well downstream of the project. The road segments in the Ellijay River headwaters will be decommissioned and revegetated (Segment A) or reconstructed and seasonally closed (Segment B), resulting in improved water quality conditions in this portion of the watershed.

Indirect Effects – The road maintenance activities in this alternative will correct the ongoing watershed impacts from the Rich Mountain road. Segment A will be decommissioned and closed to vehicular traffic. Restoration of the existing gullies and reestablishment of vegetative cover on the road should minimize any water quality impacts from this portion of the road. Although the remainder of road will be open to vehicular traffic, it will be closed during the winter months when freeze/thaw events can contribute to the deterioration of the road. These actions will result in improved conditions for aquatic PETS and Locally Rare species that occur downstream of the road.

Cumulative Effects - No additional actions are planned in the portions of the watersheds downstream of the Rich Mountain Road. Forest-wide water quality standards, Riparian Corridor (MRx 11) standards, as well as guidelines from the Manual for Erosion and Sediment Control in Georgia (2000) and Georgia's Best Management Practices for Forestry (1999) will be followed all future projects on the Forest to maintain water quality and prevent adverse impacts to aquatic species. In addition, ongoing and future watershed improvement projects throughout the Forest will be designed and implemented to reduce existing water quality impacts.

Effects of Alternative 4

Direct Effects – The effects of this Alternative will be similar to Alternative 3. Reconstruction and decommissioning activities proposed in this alternative will correct the ongoing watershed impacts from the Rich Mountain road. The decommissioning and revegetation of the western 1.3 miles of the road (Segment A) will greatly reduce impacts in this portion of the watershed. Reconstruction activities on the remainder of the road will reestablish proper drainage structures and improve the condition of existing stream crossings. While some short-term impacts could occur during the period of time the roadwork is being completed, these impacts will be minimized through the use of appropriate erosion control measures such as the use of silt fences, hay bales, brush barriers, and prompt revegetation of exposed soils. The repair and reconstruction of the Rich Mountain road will result in improved water quality conditions for the aquatic PETS and Locally Rare species that occur downstream of the road. The species mostly likely to benefit from these actions are those species of dragonflies and the stonefly discussed above that potentially occur in the headwater portions of the streams. Because most of the other PETS and Locally Rare species occur in the main stem rivers and larger tributaries well downstream of the Rich Mountain road, potential benefits from a

reduction in sedimentation to these species are likely to be much more limited. This includes the Federally Endangered goldline darter, which occurs in the Ellijay River mainstem, well downstream of the project. The road segments in the Ellijay River headwaters will be decommissioned and revegetated (Segment A) or reconstructed and closed except for administrative use (Segment B), resulting in improved water quality conditions in this portion of the watershed.

Indirect Effects - The road maintenance activities in this alternative will correct the ongoing watershed impacts from the Rich Mountain road. Segment A will be decommissioned and closed to vehicular traffic. Restoration of the existing gullies and reestablishment of vegetative cover on the road should minimize any water quality impacts from this portion of the road. Segment B be reconstructed and will remain closed year-round to motor vehicles, except for administrative use. Although the remainder of road will be open to vehicular traffic, it will be closed during the winter months when freeze/thaw events can contribute to the deterioration of the road. These actions will result in improved conditions for aquatic PETS and Locally Rare species that occur downstream of the road.

Cumulative Effects - No additional actions are planned in the portions of the watersheds downstream of the Rich Mountain Road. Forest-wide water quality standards, Riparian Corridor (MRx 11) standards, as well as guidelines from the Manual for Erosion and Sediment Control in Georgia (2000) and Georgia's Best Management Practices for Forestry (1999) will be followed all future projects on the Forest to maintain water quality and prevent adverse impacts to aquatic species. In addition, ongoing and future watershed improvement projects throughout the Forest will be designed and implemented to reduce existing water quality impacts.

Effects of Alternative 5

Direct Effects – Road reconstruction activities proposed in this alternative will correct the ongoing watershed impacts from the Rich Mountain road. While some short-term impacts could occur during the period of time the roadwork is being completed, these impacts will be minimized through the use of appropriate erosion control measures such as the use of silt fences, hay bales, brush barriers, and prompt revegetation of exposed soils. The repair and reconstruction of the Rich Mountain road will result in improved water quality conditions for the aquatic PETS and Locally Rare species that occur downstream of the road. The species mostly likely to benefit from these actions are those species of dragonflies and the stonefly discussed above that potentially occur in the headwater portions of the streams. Because most of the other PETS and Locally Rare species occur in the main stem rivers and larger tributaries well downstream of the Rich Mountain road, potential benefits from a reduction in sedimentation to these species are likely to be much more limited. This includes the Federally Endangered goldline darter, which occurs in the Ellijay River mainstem, well downstream of the project. The road segments in the Ellijay River headwaters (Segments A and B) will be reconstructed and

closed except for administrative use, resulting in improved water quality conditions in this portion of the watershed.

Indirect Effects - The road maintenance activities in this alternative will correct the ongoing watershed impacts from the Rich Mountain road. The entire road will remain closed year-round to motor vehicles, except for administrative use. Limiting vehicular use of the road will minimize and water quality impacts from the road. This will result in improved conditions for aquatic PETS and Locally Rare species that occur downstream of the road.

Cumulative Effects - No additional actions are planned in the portions of the watersheds downstream of the Rich Mountain Road. Forest-wide water quality standards, Riparian Corridor (MRx 11) standards, as well as guidelines from the Manual for Erosion and Sediment Control in Georgia (2000) and Georgia's Best Management Practices for Forestry (1999) will be followed all future projects on the Forest to maintain water quality and prevent adverse impacts to aquatic species. In addition, ongoing and future watershed improvement projects throughout the Forest will be designed and implemented to reduce existing water quality impacts.

Effects of Alternative 6

Direct Effects – Road decommissioning activities proposed in this alternative will correct the ongoing watershed impacts from the Rich Mountain road. While some short-term impacts could occur during the period of time the roadwork is being completed, these impacts will be minimized through the use of appropriate erosion control measures such as the use of silt fences, hay bales, brush barriers, and prompt revegetation of exposed soils. The decommissioning of the Rich Mountain road will result in improved water quality conditions for the aquatic PETS and Locally Rare species that occur downstream of the road. The species mostly likely to benefit from these actions are those species of dragonflies and the stonefly discussed above that potentially occur in the headwater portions of the streams. Because most of the other PETS and Locally Rare species occur in the main stem rivers and larger tributaries well downstream of the Rich Mountain road, potential benefits from a reduction in sedimentation to these species are likely to be much more limited. This includes the Federally Endangered goldline darter, which occurs in the Ellijay River mainstem, well downstream of the project. The road segments in the Ellijay River headwaters (Segments A and B) will be decommissioned and revegetated, resulting in improved water quality conditions in this portion of the watershed.

Indirect Effects – The entire road will be decommissioned and closed to vehicular traffic under this alternative. Restoration of the existing gullies and reestablishment of vegetative cover on the road should minimize any water quality impacts from the road. This will result in improved conditions for the aquatic PETS and Locally Rare species that occur downstream of the road.

Cumulative Effects - No additional actions are planned in the portions of the watersheds downstream of the Rich Mountain Road. Forest-wide water quality standards, Riparian

Corridor (MRx 11) standards, as well as guidelines from the Manual for Erosion and Sediment Control in Georgia (2000) and Georgia's Best Management Practices for Forestry (1999) will be followed all future projects on the Forest to maintain water quality and prevent adverse impacts to aquatic species. In addition, ongoing and future watershed improvement projects throughout the Forest will be designed and implemented to reduce existing water quality impacts.

SOCIOECONOMIC FACTORS

Element– Recreational Use

Recreational Motorized Vehicle Use

Machines that use a motor, engine, or other non-living power source. This includes but is not limited to such machines as state-licensed motor vehicles, OHV and ATV's

Recreational Non-motorized vehicle use

Methods of transportation or equipment that does not use an engine. This includes but is not limited to such things as horses, mountain bikes and foot travel.

Measure – Recreational Opportunities and use by the various user groups

Bounds of analysis: **Spatial:** Use of the Rich Mountain road itself, along with the adjacent Rich Mountain Wilderness Area and Natural Area (4.I Management Prescription). The area of analysis is approximately 12,908 acres. **Temporal:** Long-term (10-15 years) access of the area by recreational users.

Existing Conditions

The Rich Mountain Road, on the Chattahoochee-Oconee, borders both the designated Rich Mountain Wilderness to the south and the 4.I Management Prescription (Natural Area – formerly the Rich Mountain High Elevation Area (MA-4)) to the north. Currently, this road is primarily being used for motorized recreational activities such as 4-wheel drive vehicle challenges. The western 1.3 miles is the steepest, roughest, most challenging portion of the road and is the primary draw. Off-Highway Vehicle (OHV) use is the most prevalent recreation use for the Rich Mountain Road. The road also provides access for traditional non-motorized recreational activities such as, hiking, horseback riding, hunting, fishing, wildlife viewing, and primary access into the wilderness. All Terrain Vehicles (ATV's) use is prohibited from the Rich Mountain Road.

Currently, there are illegal entry points into the Natural Area from motorized vehicles. The Natural Area does provide a degree of semi-primitive and non-motorized recreation

opportunities and a variety of quality hunting opportunities and experiences. There are also illegal motorized entries into the designated Rich Mountain Wilderness. These entries usually dead-end at a non-designated camping site. The Rich Mountain Wilderness still provides a degree of solitude, natural environment and dispersed recreation.

Effects of Alternative 1 (No Action)

Direct Effects - **Motorized Use:** Unlimited access to all street legal, high-clearance OHV motor vehicles will continue on this road. All road segments will remain in its present condition. **Non-motorized Use:** Unlimited access to all non-motorized use such as, horseback riding, mountain bikes, and foot travel will continue on this road.

Indirect Effects - **Motorized Use:** At times, usually on weekends, engine noises from high-clearance vehicles can lead to an undesirable impact on the primitive recreation experience in both the Wilderness and Natural Area. **Non-motorized Use:** Unlimited access continues, as well as illegal motorized use in the edge of the Wilderness (1.A MRx) and in the Natural Area (4.I.MRx). This aids in the access for non-motorized recreation.

Cumulative Effects - An increase in various unmanaged outdoor recreational activities, such as horseback riding, OHV use, camping and hunting is expected. An increase in vehicle use with various engine noises will lessen the primitive and semi-primitive recreation experience for those recreating in the Rich Mountain Wilderness and surrounding area.

Effects of Alternative 2

Direct Effects - **Motorized Use:** This alternative continues to allow specialized recreation of high clearance vehicles to access this area. Road conditions are improved. **Non-motorized Use:** Unlimited access to all non-motorized use such as, horseback riding and foot travel continues.

Indirect Effects - **Motorized Use:** Providing unlimited access and maintaining this road at level 2 will make it more passable, which will lead to an overall increase vehicle usage. The entire road remains open for unlimited access and continues to provide a method of access to the Rich Mountain Wilderness (1.A MRx) and the Natural Area (4.I.MRx). This year-round, unrestricted access could lead to continued illegal motorized use in the edge of the Wilderness (1.A MRx) and in the Natural Area (4.I.MRx). However, improved road conditions also will enhance the ability of law enforcement personnel to effectively patrol the area. **Non-motorized Use:** Unlimited access continues. Maintaining this road at a level 2 provides for safer usage by the non-motorized recreationists. In addition, more recreational opportunities become available to visitors due to improved access.

Cumulative Effects - An increase in vehicle use with various engines noises will lessen the primitive and semi-primitive recreation experience for those recreating in the Rich Mountain Wilderness and surrounding area. Illegal trails along the edge of the wilderness area will continue. However, law enforcement presence will be increased due to improved road conditions.

Effects of Alternative 3 (Proposed Action)

Direct Effects- Motorized Use: This alternative continues to allow for specialized recreation with high clearance vehicles to access this area from the eastern eight miles. Road conditions are improved. However, access for this road is limited seasonally. Segment A (western 1.3 miles) is decommissioned, which will eliminate OHV use on this portion of the road. **Non-motorized Use:** Recreationists that utilize horses and mountain bikes are able to access this road from the eastern end for up to eight miles. The entire road remains open for unlimited foot travel and continues to provide a method of access to the Rich Mountain Wilderness (1.A MRx) and in the Natural Area (4.I.MRx).

Indirect Effects - Motorized Use: Reconstructing the eastern eight miles of road allows for continued use of the road for motorized vehicles seasonally. Reconstruction decreases illegal trails from this road because law enforcement has the ability to patrol more effectively. **Non-motorized Use:** Reconstructing the eastern eight miles of road allows for continued use of this portion of the road by horse and mountain bike riders year-round. Unlimited foot travel is allowed year-round to access the Rich Mountain Wilderness (1.A MRx) and the Natural Area (4.I.MRx) from either end of the road, but is more challenging from the western end.

Cumulative Effects - With seasonal vehicle use, with various engine noises, the primitive and semi-primitive recreation experiences for those recreating in the Rich Mountain Wilderness and surrounding area will increase (use will be more concentrated during fewer months of the year). A decrease in illegal trails along the edge of the wilderness area is expected. Law enforcement will have the ability to patrol more frequently to prevent illegal motorized use.

Effects of Alternative 4

Direct Effects - Motorized Use: Segment A (western 1.3 miles) is decommissioned and will be closed to OHV use. Motorized vehicles are stopped from entering the western end of the road. Motorized access is permitted from the eastern end for 6.1 miles on a seasonal basis. Any vehicles that use on this road will have to enter and exit the same way. This action shortens the vehicle destination of various users. **Non-motorized Use:** Those who utilize horseback and mountain bikes will only be able to access this road from the eastern end for eight miles. Unlimited foot travel is allowed. Access to the Rich Mountain Wilderness (1.A MRx) and the Natural Area (4.I.MRx) is year-round from either end of the road, but is more challenging from the western end.

Indirect Effects -**Motorized Use:** Reconstructing the eastern 6.1 miles of road, with seasonal restrictions, allows for continued use of the road for motorized vehicles. Reconstruction will decrease illegal trails from the road, because law enforcement will have a better the ability to patrol and there will not be a need to drive around impassable mud holes or washouts. **Non-motorized Use:** Those who utilize horseback and mountain bikes will only be able to access this road from the eastern end for eight miles. Foot travel will be allowed as a means to access the Rich Mountain Wilderness (1.A MRx) and in the Natural Area (4.I.MRx) year-round from either end, but is more challenging from the western end.

Cumulative Effects - With seasonal vehicle use on 6.1 miles of road, the primitive and semi-primitive recreation experiences for those recreating in the Rich Mountain Wilderness and surrounding area will increase (use will be more concentrated during fewer months of the year). A decrease in illegal trails along the edge of the wilderness area is expected. Law enforcement will have a better ability to patrol more frequently and prevent non-conforming uses.

Effects of Alternative 5

Direct Effects - **Motorized Use:** Any motorized access for recreational purposes to the north side of Rich Mountain Wilderness (1.A MRx) and the south end of the Natural Area (4.I.MRx) from this road will be lost. Vehicular access will be for administrative use only on all segments. **Non-motorized:** Those who utilize horseback and mountain bikes will be able to access this road from either end. Unlimited foot travel will be allowed to access the Rich Mountain Wilderness (1.A MRx) and in the Natural Area (4.I.MRx) year-round from either end of the road.

Indirect Effects - **Motorized Use:** Motorized access by use of this road would be eliminated, and law enforcement will have an improved ability to enforce regulations. **Non-motorized Use:** Unlimited access to all non-motorized use such as horseback riding, mountain bikes, and foot travel continues on the entire road.

Cumulative Effects - All motorized vehicle use is eliminated from the road, which promotes a more primitive and semi-primitive recreation experience for those using the Rich Mountain Wilderness and surrounding area. Illegal trails along the edge of the wilderness area are expected to decrease. Law enforcement will increase and have an improved ability to enforce regulations.

Effects of Alternative 6

Direct Effects - **Motorized Use:** Any motorized access into the Rich Mountain Wilderness (1.A MRx) and in the Natural Area (4.I.MRx) from this road will be lost. Entire road is decommissioned. **Non-motorized Use:** The entire road will be closed to use by horses and mountain bikes. Unlimited foot travel will be allowed to access the Rich Wilderness (1.A MRx) and in the Natural Area (4.I.MRx) year-round from either end of the road, but it will be challenging.

Indirect Effects - Motorized Use: Motorized access by use of this road would be eliminated, and law enforcement will have an improved ability to enforce regulations. **Non-motorized Use:** Those who utilize horseback and mountain bikes will not be able to access this road from either end. Unlimited foot travel will be allowed to access the Rich Mountain Wilderness (1.A MRx) and in the Natural Area (4.I.MRx) year-round from either end of the road, but it will be challenging.

Cumulative Effects - All motorized, horseback, and mountain bike use is eliminated from the Rich Mountain road. This promotes a more primitive and semi-primitive recreation experience for those recreating in the Rich Mountain Wilderness and surrounding area. Law enforcement will be limited by the lack of motorized access but an improved ability to enforce regulations becomes evident.

Element - Local Economy

Measure - Spending by recreational users

Bounds of analysis: **Spatial:** Rich Mt. WMA and other NF areas within Gilmer county that could be substituted. **Temporal:** Short (1-3 years) and long-term (10-15 years) effects.

Existing Conditions

Participation rate in specific recreational activities is one indicator of the economic contributions of the various user groups to the local economy. A forest-wide user survey, completed as part of the Forest Plan revision (USDA Forest Service 2004:3-638) indicated that the most popular activities across the Forest are driving for pleasure (74% participation rate), nature viewing and photography (60%), picnicking (56%), wilderness/roadless area use (40%) and hiking (39%). Participation rate in off-road vehicle use and hunting were 24% and 12 %, respectively.

The Rich Mountain road is used by a variety of groups including OHV enthusiasts, hunters, fishermen, campers, wilderness users, sightseers, hikers, mountain bike riders, and horseback riders. These users have an economic benefit to the local community through the purchase of gas, food, hunting, fishing, and camping supplies and related items. No specific user related surveys have been completed for the Rich Mountain area. Therefore the actual dollar value of this benefit to the local community is unknown. However the greatest economic benefit likely comes from the OHV users and hunters, which are the largest user groups on the Rich Mountain area. The number of OHV users is unknown but approximately 1000-1500 hunters use the area each year.

Effects of Alternative 1 (No Action)

Direct Effects- No maintenance activities will occur on the Rich Mountain road under this alternative. In the short-term, this alternative would perpetuate the current conditions and there would be no change in the economic benefit to local communities.

Indirect Effects - As road conditions continue to deteriorate, access may be increasingly difficult for many of the user groups. This may result in a decrease in use by groups such as hunters, campers, and wilderness users, which would decrease expenditures by these groups in the local community. The level of use and expenditures by OHV users likely would be maintained or increased under this alternative.

Cumulative Effects –Users of the Rich Mountain road provide a benefit to the locally economy in Gilmer County through the purchase of gas, food, hunting, fishing, and camping supplies and related items. This alternative would perpetuate current conditions relative to recreational access and in turn spending by these users. No additional actions are planned on the Rich Mountain WMA that would effect spending by recreational users in the local economy.

Effects of Alternative 2

Direct Effects - Under this alternative, access for users such as hunters, fishermen, campers, and wilderness users would be enhanced due to improved conditions of the Rich Mountain road. This may increase the number of visits by these users, which would have some additional local economic benefits.

Indirect Effects – Although the road would remain open to state-licensed vehicles and overall vehicle use may increase, the improved road conditions are likely to reduce the attraction of the area to specialized, high-challenge OHV enthusiasts and a decrease in this type of use is anticipated. The decreased use by OHV riders would likely result in reduced expenditures by this group in the local community.

Cumulative Effects – Users of the Rich Mountain road provide a benefit to the locally economy in Gilmer County through the purchase of gas, food, hunting, fishing, and camping supplies and related items. No additional actions are planned on the Rich Mountain WMA that would effect spending by recreational users in the local economy. However, changes in the status and management of the Rich Mountain Road could change the amount of use and local expenditures by recreational users. Alternative areas on the National Forest and State lands are available nearby, which likely will help sustain the contribution of recreational users to the local economy. One example is the Anderson Creek OHV area in Gilmer County, for which trail system improvements and expansion are being planned. There also is a substantial acreage of general National Forest land in Gilmer County as well as the Cohutta and Coosawattee WMAs that are available for hunting, fishing, camping and other recreational pursuits. With the wide variety of alternative opportunities for recreational users in the area, no cumulative effects on the

local economy are expected from any past, present, or reasonably foreseeable changes to the status and management of the Rich Mountain Road.

Effects of Alternative 3 (Proposed Action)

Direct Effects - Under this alternative, access for users such as hunters, fishermen, campers, and wilderness users would be enhanced due to improved conditions of the Rich Mountain road. This may increase the number of visits by these users, which would have some additional local economic benefits.

Indirect Effects - The decommissioning of the very popular western portion of the road along with the improvements to the remainder of the road are likely to further reduce the attraction of the area to recreational OHV enthusiasts and a decrease in this type of use is anticipated. The decreased use by OHV riders would likely result in reduced expenditures by this group in the local community.

Cumulative Effects – Users of the Rich Mountain road provide a benefit to the locally economy in Gilmer County through the purchase of gas, food, hunting, fishing, and camping supplies and related items. No additional actions are planned on the Rich Mountain WMA that would effect spending by recreational users in the local economy. However, changes in the status and management of the Rich Mountain Road could change the amount of use and local expenditures by recreational users. Alternative areas on the National Forest and State lands are available nearby, which likely will help sustain the contribution of recreational users to the local economy. One example is the Anderson Creek OHV area in Gilmer County, for which trail system improvements and expansion are being planned. There also is a substantial acreage of general National Forest land in Gilmer County as well as the Cohutta and Coosawattee WMAs that are available for hunting, fishing, camping and other recreational pursuits. With the wide variety of alternative opportunities for recreational users in the area, no cumulative effects on the local economy are expected from any past, present, or reasonably foreseeable changes to the status and management of the Rich Mountain Road.

Effects of Alternative 4

Direct Effects - The effects of this alternative would be similar to Alternative 3. Under this alternative, access for users such as hunters, fishermen, campers, and wilderness users would be enhanced due to improved conditions of the Rich Mountain road. This may increase the number of visits by these users, which would have some additional local economic benefits.

Indirect Effects - The decommissioning of the very popular western portion of the road along with the improvements to the remainder of the road are likely to further reduce the attraction of the area to recreational OHV enthusiasts and a decrease in this type of use is anticipated. The decreased use by OHV riders would likely result in reduced expenditures by this group in the local community.

Cumulative Effects – Users of the Rich Mountain road provide a benefit to the locally economy in Gilmer County through the purchase of gas, food, hunting, fishing, and camping supplies and related items. No additional actions are planned on the Rich Mountain WMA that would effect spending by recreational users in the local economy. However, changes in the status and management of the Rich Mountain Road could change the amount of use and local expenditures by recreational users. Alternative areas on the National Forest and State lands are available nearby, which likely will help sustain the contribution of recreational users to the local economy. One example is the Anderson Creek OHV area in Gilmer County, for which trail system improvements and expansion are being planned. There also is a substantial acreage of general National Forest land in Gilmer County as well as the Cohutta and Coosawattee WMAs that are available for hunting, fishing, camping and other recreational pursuits. With the wide variety of alternative opportunities for recreational users in the area, no cumulative effects on the local economy are expected from any past, present, or reasonably foreseeable changes to the status and management of the Rich Mountain Road.

Effects of Alternative 5

Direct Effects - Under this alternative, the entire road would be closed except for administrative use. This would significantly decrease access for users such as hunters, fishermen, campers, and wilderness users. These users will still be able to access the area on foot, but without road access, use likely will decline. This would decrease the expenditures of these users in the local community.

Indirect Effects - Closing of the road to vehicular use will eliminate all use by OHV riders, resulting in a complete loss of the local community expenditures by this user group.

Cumulative Effects – Users of the Rich Mountain road provide a benefit to the locally economy in Gilmer County through the purchase of gas, food, hunting, fishing, and camping supplies and related items. No additional actions are planned on the Rich Mountain WMA that would effect spending by recreational users in the local economy. However, changes in the status and management of the Rich Mountain Road could change the amount of use and local expenditures by recreational users. Alternative areas on the National Forest and State lands are available nearby, which likely will help sustain the contribution of recreational users to the local economy. One example is the Anderson Creek OHV area in Gilmer County, for which trail system improvements and expansion are being planned. There also is a substantial acreage of general National Forest land in Gilmer County as well as the Cohutta and Coosawattee WMAs that are available for hunting, fishing, camping and other recreational pursuits. With the wide variety of alternative opportunities for recreational users in the area, no cumulative effects on the local economy are expected from any past, present, or reasonably foreseeable changes to the status and management of the Rich Mountain Road.

Effects of Alternative 6

Direct Effects - The effects of this alternative would be similar to Alternative 5. Under this alternative, the entire road would be decommissioned. This would significantly decrease access for users such as hunters, fishermen, campers, and wilderness users. These users will still be able to access the area on foot, but without road access, use likely will decline. This would decrease the expenditures of these users in the local community.

Indirect Effects - Decommissioning of the road will eliminate all use by OHV riders, resulting in a complete loss of the local community expenditures by this user group.

Cumulative Effects – Users of the Rich Mountain road provide a benefit to the locally economy in Gilmer County through the purchase of gas, food, hunting, fishing, and camping supplies and related items. No additional actions are planned on the Rich Mountain WMA that would effect spending by recreational users in the local economy. However, changes in the status and management of the Rich Mountain Road could change the amount of use and local expenditures by recreational users. Alternative areas on the National Forest and State lands are available nearby, which likely will help sustain the contribution of recreational users to the local economy. One example is the Anderson Creek OHV area in Gilmer County, for which trail system improvements and expansion are being planned. There also is a substantial acreage of general National Forest land in Gilmer County as well as the Cohutta and Coosawattee WMAs that are available for hunting, fishing, camping and other recreational pursuits. With the wide variety of alternative opportunities for recreational users in the area, no cumulative effects on the local economy are expected from any past, present, or reasonably foreseeable changes to the status and management of the Rich Mountain Road.

Element - Law Enforcement And Public Safety

Measure – Access by law enforcement and emergency services personnel, level of illegal ATV use

Bounds of analysis: **Spatial:** Portion of the Rich Mountain WMA Area accessed by the Rich Mountain Road. **Temporal:** Short-term (1-3 years) and long-term (10-15 years) impacts.

Existing Conditions

Prior to May 2003, the Rich Mountain Road was considered to be a public road under jurisdiction of Gilmer County. Because the road was not under Forest Service control, the Forest Service did not restrict ATV use on the road. However Forest Service law enforcement personnel have restricted ATV use of the road since May 2003, when it was determined to be under Forest Service jurisdiction. At that time, the road was posted as closed to ATV use. This information also was provided to the public through the local news media. Initially, warning citations were issued to ATV users, however after several

months of passive enforcement, law enforcement personnel now are issuing regular tickets for illegal ATV use of the road.

The present road condition severely restricts enforcement in the area since the area is only readily accessible by ATV or on foot. As a result, illegal off-road ATV use has occurred on the area. This illegal activity was greatest when the ATV use of the Rich Mountain road was not prohibited. However, since June 2003, ATV use of the Rich Mountain road has been prohibited, which has greatly reduced illegal off-road use.

OHV's are state-licensed, street-legal vehicles such as 4-wheel drive pick-ups, SUV's, and motorcycles. State-licensed vehicles are allowed on all open roads on the Forest unless otherwise posted. This includes the Rich Mountain road.

In its current condition the road is nearly impassable except for high-clearance 4-wheel drive vehicles and ATV's. It is not safe for general public use. In addition, in the event of an accident or other emergency, road conditions severely limit access into the area by Emergency Services vehicles or by fire suppression personnel.

Effects of Alternative 1 (No Action)

Direct Effects - No maintenance activities will occur on the Rich Mountain road under this alternative. In the short-term, this alternative would perpetuate the current conditions and there would be no change in the level of access available for law enforcement and emergency services personnel. Access would remain limited due to poor road conditions.

Indirect Effects – Due to lack of maintenance, the condition of the Rich Mountain road is expected to deteriorate. This likely would further hamper the ability of law enforcement personnel to adequately patrol the area. This would result in minimal control of illegal ATV use of the area. In addition, the road would become increasingly hazardous to users as conditions deteriorated. This would also further hinder access by Emergency Service vehicles and fire suppression personnel.

Cumulative Effects – Road conditions are expected to deteriorate under this alternative hampering access by law enforcement and emergency services personnel. Illegal ATV use occurs throughout the Forest and will continue in the Rich Mountain area under this alternative. However, throughout the Forest, law enforcement personnel are working to reduce this through the use actions such as targeted enforcement on identified areas of high illegal use. Additional measures such as access controls through seasonal closure and closure of illegal routes are being throughout the Forest to help reduce this illegal use.

Effects of Alternative 2

Direct Effects - Under this alternative, the entire road would be reconstructed to maintenance level 2 and would be open year-round. These improved road conditions

will result in enhanced ability of law enforcement personnel to effectively patrol the area and provide increased control of illegal activity ATV.

The improved road conditions would increase the safety of users of the road. In the event of an accident or other emergency, Emergency Services could access the area from both the eastern and western end of the road. Access for fire suppression personnel also would be improved.

Indirect Effects - The improved road conditions would increase overall use on the road, and since the entire road would remain open year-round, opportunities for illegal ATV activity could increase. However, improved access for law enforcement personnel and increased law enforcement presence is expected to result in a decrease in illegal ATV use over time.

Cumulative Effects – Improvement in the condition of the Rich Mountain Road under this alternative will improve access by law enforcement and emergency services personnel. Illegal ATV use occurs throughout the Forest. However, throughout the Forest, law enforcement personnel are working to reduce this through the use actions such as targeted enforcement on identified areas of high illegal use. Additional measures such as access controls through seasonal closure and closure of illegal routes are being used throughout the Forest to help reduce this illegal use. Cumulatively, these actions should contribute to improved resource conditions on the Forest.

Effects of Alternative 3 Proposed Action)

Direct Effects - Under this alternative, the eastern 8 miles of the road (Segments B, C, and D) would be reconstructed to maintenance level 2 and would be open seasonally. In addition, the western 1.3 miles of the road (Segment A) would be decommissioned. Improved road conditions will result in enhanced ability of law enforcement personnel to effectively patrol the area and an increased control of illegal activity ATV. In addition, the reduced access resulting from the decommissioning of the western 1.3 miles (Segment A) and the seasonal closure of the remainder of the road would further reduce opportunities for illegal ATV activity.

The improved road conditions would increase the safety of users of the road. The steepest and most hazardous portion of the road would be decommissioned under this alternative. In the event of an accident or other emergency, Emergency Services could access the area from the eastern end of the road. Access for fire suppression personnel also would be improved.

Indirect Effects - The decommissioning of a portion of the Rich Mountain road and the seasonal closure of the remainder will reduce opportunities for illegal ATV use in the area. Law enforcement presence will continue to be necessary, but the ability to control access should reduce opportunities for illegal use. This should allow law enforcement personnel to devote more of their time and resources to other portion of the District where illegal ATV use is occurring.

Cumulative Effects - Improvement in the condition of the Rich Mountain Road under this alternative will improve access by law enforcement and emergency services personnel. Illegal ATV use occurs throughout the Forest. However, law enforcement personnel are working to reduce this through the use actions such as targeted enforcement on identified areas of high illegal use. Measures that are being considered for the Rich Mountain road such as access controls through seasonal closure and closure of illegal routes are being used throughout the Forest to help reduce this illegal use. Similar projects will be developed in the future that will contribute to a reduction of illegal ATV use on the Forest. Cumulatively, these actions should contribute to improved resource conditions on the Forest.

Effects of Alternative 4

Direct Effects - Under this alternative, the eastern 6.1 miles of the road (Segments C and D) would be reconstructed to maintenance level 2 and would be open seasonally. The adjacent 1.9 miles of road (Segment B) would be limited to administrative access only. In addition, the western 1.3 miles of the road (Segment A) would be decommissioned. The effects of this alternative on the control of illegal ATV activity would be similar to Alternative 3. Improved road conditions will result in enhanced ability of law enforcement personnel to effectively patrol the area and an increased control of illegal activity ATV. In addition, the reduced access resulting from the decommissioning of the western 1.3 miles (Segment A) and the administrative and/or seasonal closure of the remainder of the road would further reduce opportunities for illegal ATV activity.

The improved road conditions would increase the safety of users of the road. The steepest and most hazardous portion of the road would be decommissioned under this alternative. In the event of an accident or other emergency, Emergency Services could access the area from the eastern end of the road. The portion of the road to be reconstructed to Maintenance Level 1 would be closed to public traffic but could be used for administrative purposes including Emergency Services vehicles as well as fire suppression personnel.

Indirect Effects - The decommissioning of a portion of the Rich Mountain road and the seasonal and/or administrative closure of the remainder will reduce opportunities for illegal ATV use in the area. Law enforcement presence will continue to be necessary, but the ability to control access should reduce opportunities for illegal use. This should allow law enforcement personnel to devote more of their time and resources to other portion of the District where illegal ATV use is occurring.

Cumulative Effects - Improvement in the condition of the Rich Mountain Road under this alternative will improve access by law enforcement and emergency services personnel. Illegal ATV use occurs throughout the Forest. However, law enforcement personnel are working to reduce this through the use actions such as targeted enforcement on identified areas of high illegal use. Measures that are being considered for the Rich Mountain road such as access controls through seasonal closure and closure of illegal routes are being

used throughout the Forest to help reduce this illegal use. Similar projects will be developed in the future that will contribute to a reduction of illegal ATV use on the Forest. Cumulatively, these actions should contribute to improved resource conditions on the Forest.

Effects of Alternative 5

Direct Effects - Under this alternative, the entire Rich Mountain Road would be reconstructed to maintenance level 1 and closed except for administrative vehicle use. The road would be improved to a degree that would allow law enforcement personnel to effectively patrol the area. However the road would be gated and remained closed year-round which will greatly reduce opportunities for illegal ATV activity. This alternative would give a maximum control of illegal use.

Under this alternative, the entire road would be reconstructed to Maintenance Level 1 and would be closed to public traffic. However, in the event of an accident or other emergency, Emergency Services could access the area from both the eastern and western end of the road. Access for fire suppression personnel also would be improved under this alternative.

Indirect Effects - The administrative closure of the entire Rich Mountain road will greatly reduce opportunities for illegal ATV use in the area. Law enforcement presence will continue to be necessary, but the ability to control access should reduce opportunities for illegal use. This should allow law enforcement personnel to devote more of their time and resources to other portion of the District where illegal ATV use is occurring.

Cumulative Effects - Improvement in the condition of the Rich Mountain Road under this alternative will improve access by law enforcement and emergency services personnel. Illegal ATV use occurs throughout the Forest. However, law enforcement personnel are working to reduce this through the use actions such as targeted enforcement on identified areas of high illegal use. Measures that are being considered for the Rich Mountain road such as access controls through administrative closure of roads and closure of illegal routes are being used throughout the Forest to help reduce this illegal use. Similar projects will be developed in the future that will contribute to a reduction of illegal ATV use on the Forest. Cumulatively, these actions should contribute to improved resource conditions on the Forest.

Effects of Alternative 6

Direct Effects - Under this alternative, the entire Rich Mountain Road would be decommissioned and only foot travel would be permitted. The effects of this alternative on the control of illegal ATV activity would be similar to Alternative 5. Decommissioning the entire road will greatly reduce opportunities for illegal ATV activity. This alternative would give a maximum control of illegal use. However, there would be no vehicular access to the area by the public, law enforcement, Emergency Services, or fire suppression personnel. In the event of an accident or other emergency,

efforts by emergency services personnel would be hampered by the lack of vehicular access.

Indirect Effects - The decommissioning of the entire Rich Mountain road will greatly reduce opportunities for illegal ATV use in the area. Law enforcement presence will continue to be necessary, decommissioning of the road should reduce opportunities for illegal use. This should allow law enforcement personnel to devote more of their time and resources to other portion of the District where this illegal use is occurring.

Cumulative Effects - Illegal ATV use occurs throughout the Forest. However, law enforcement personnel are working to reduce this through the use actions such as targeted enforcement on identified areas of high illegal use. Measures that are being considered for the Rich Mountain road such as access controls through the decommissioning of roads and closure of illegal routes are being used throughout the Forest to help reduce this illegal use. Similar projects will be developed in the future that will contribute to a reduction of illegal ATV use on the Forest. Cumulatively, these actions should contribute to improved resource conditions on the Forest.

Appendix A

Responses to Scoping

Commenter	Organization	Date
Rita Barnhart		6/10/2003
Robert P. Gill	Trout Unlimited	6/16/2003
Sam C. Houston		6/17/2003
Ronnie McKinney		6/19/2003
Anthony C. Murphy		6/20/2003
Jeffrey S. Anderson		6/21/2003
Jerome M. Walker, Jr.M.D.	GA Chapter Wilderness Watch	6/24/2003
Stefan Roth	Southern Four Wheel Drive Association	6/25/2003
Jonathan Horrobin		6/25/2003
Shepherd L. Howell		6/26/2003
James C. Dahlquist, DDS	GA Cruisers 4WD Club	6/27/2003
David Govus		6/28/2003
Tom Govus		6/28/2003
Brad Black		6/27/2003
Tyler G. Divin		6/28/2003
Jean H. Smilie		6/29/2003
Mary Kay Moore		6/29/2003
Scott P. MacGregor		6/29/2003
Mary Campbell		6/30/2003
Robb L. Sundmaker	Southern Land Rover Society	6/30/2003
Joan Beck, Chairwoman	Bullhead 4 Wheelers, Inc.	6/30/2003
Bob & Rita Kirby	Middle TN Christian Jeep Club	6/30/2003
Kitty Meyers		7/1/2003
Sally Harrell, Representative	Georgia House of Representatives	7/1/2003
Charles K. McClung		7/1/2003
Shirl Parsons	The Wilderness Society	7/1/2003
James G. McGarvie, Exec. VP	Off-Road Business Association, Inc.	7/2/2003
Brent Martin, Exec. Director	Georgia ForestWatch	7/2/2003
Kevin Sutz		7/3/2003
Bob Brister		8/30/2003
Wayne Jenkins		7/3/2003
Thomas A. Nagle		7/3/2003
Deriek Eaves		
Richard Wilson		9/15/2003
Gary Farmer		6/8/2003
Dave Logan		6/10/2003
Jay Bird		6/10/2003
Ric & Lynn Barton		6/10/2003

Curtis & Rita Barnhart		6/10/2003
Ryan Shanteau		6/10/2003
Justin Breedlove		6/10/2003
Hank Blackwood		6/11/2003
Anthony Snevey	GA Chap Tacoma Territory Off-Road Assoc.	6/12/2003
Wendell D. Woods		6/14/2003
Paul Beck		6/14/2003
Chris Hinckley		6/15/2003
Dane & Mica Kirby		6/15/2003
R.L. Stanley		6/16/2003
Nathan Carlson		6/16/2003
Terence Jent		6/16/2003
Ken Mercer		6/16/2003
Jim Goss		6/16/2003
Edwin Dale		6/14/2003
David Hertzler		6/17/2003
Greg A. Sheppard	Lumpkin County Extension Coordinator	6/17/2003
Kenneth Foster		6/17/2003
Adam Tutwiler		6/17/2003
Scott Marsh		6/17/2003
Matt Gann		6/17/2003
Daniel F. Bartolo		6/18/2003
Brian Gibson		6/18/2003
Norman Lyles		6/18/2003
David Lee		6/18/2003
Natalie Gibson		6/18/2003
Eric Potts		6/18/2003
Tammy Childree		6/18/2003
John M. Dodd		6/19/2003
Terry Gilliam		6/19/2003
Harold Mull		6/19/2003
Paul Downing		6/19/2003
Jason Poole		6/20/2003
Gary Davila		6/20/2003
Amy McCoy		6/20/2003
Joseph Cantrell		6/21/2003
John Medicus		6/21/2003
Ellis Camp		6/22/2003
James Bodtke		6/22/2003
John Streppa		6/23/2003
Brittany Chastain & Matt Hefner		6/23/2003
Beau Ames		6/24/2003
Jeremy R. Brown		6/24/2003

Chad Ramsey		6/25/2003
Brandon Ryan		6/26/2003
Jay Pember		6/26/2003
William Grant Snowden		6/26/2003
Jim Pearce		6/26/2003
Paul Johnson		6/26/2003
Barry C. McCoin	Sensory Solutions	6/26/2003
Steven J. Howell, CPA		6/26/2003
Tal Isbell, Sr VP	Jones Lang LaSalle	6/26/2003
Brandon Mobley		6/26/2003
Gerald R. Gould		6/26/2003
Phil Davis		6/27/2003
Jason Vannoy		6/27/2003
John C. Sanders, P.E.		6/27/2003
Garey L. Simpson		6/27/2003
Brian Robinson		6/27/2003
Rafe Smith		6/27/2003
L. Lane Bailey		6/27/2003
Fred Smallwood, Jr.		6/27/2003
Kenneth Steele		6/28/2003
Allen T. Hinkle		6/28/2003
Walter C. McCourt		6/30/2003
Andrew Brackett		6/30/2003
Greg Allen		6/30/2003
Jeannette Rowe		6/30/2003
David Russell		6/30/2003
Joshua Suggs		6/30/2003
Daniel Andrews		7/2/2003
Darleen Jarman, Conservation Director	Georgia Appalachian Trail Club	7/2/2003
John Stewart, Director Env. Affairs	United Four Wheel Drive Association	7/2/2003
Tracy Harris		7/3/2003
Nelson Wilkinson		7/3/2003
Keil Thompson	GA Cruisers 4WD Club	7/3/2003
Butch Martiny		7/4/2003
Hilburn O. Hillested, Ph.D		7/5/2003
Robert G. Smiles, Jr, Esq.		7/5/2003
Mike Hinderleider		6/27/2003
Pembroke Williams		7/11/2003
Jim Walker		7/13/2003

APPENDIX B

Nonsignificant Issues

Issue	<i>Reason For Nonsignificance</i>
Watershed forests should be protected from logging	This issue is outside the scope of the proposed action. The proposed action only involves the future management and status of the Rich Mountain road. No logging is being considered as part of this project.
No new logging roads, no more logging	This issue is outside the scope of the proposed action. The proposed action only involves the future management and status of the Rich Mountain road. No logging or new logging roads are being considered as part of this project.
Areas should not be opened to ATV's	This issue is outside the scope of the proposed action. The proposed action only involves the future management and status of the Rich Mountain road. The road is closed to ATV's and opening the area to ATV's is not being contemplated.
User created trails should be used to create an off-road system and should not be closed	This issue is already decided by law. The National Forest lands adjacent to the Rich Mountain road are in Management Prescriptions (Wilderness, Natural Area) that do the permit the creation of an off-road OHV/ATV trail system.
Lack of progress on Anderson Creek OHV trail system	This issue is outside the scope of the proposed action. The proposed action only involves the future management and status of the Rich Mountain road and does not consider any actions for the Anderson Creek OHV trail system.

Appendix C

Mitigation And Monitoring Measures Common To Action Alternatives

The following mitigation measures would reduce possible adverse effects from the proposed activities:

1. Rich Mountain Wilderness and Wildlife Management Area have been posted with signs that clearly show the public where they can legally ride motorized vehicles.
2. Signs will be posted to clearly identify the boundary of the Rich Mountain Wilderness.
3. Established roads or routes will be monitored to determine further encroachment by illegal motorized use and corrective actions will be taken as needed.
4. During reconstruction, warning and safety messages will be posted for forest visitors to the area.
5. The known locations the Locally Rare plant species starflower (*Trientalis borealis*) and horse gentian (*Triosteum aurantiacum*) will be protected from disturbance.
6. The known Heritage Resources sites will be protected from disturbance.
7. Appropriate erosion control measures will be used to minimize potential impacts from the proposed activities. Examples may include the use of silt fences, hay bales, brush barriers, and prompt revegetation of exposed soils. Georgia's Best Management Practices for Forestry (1999), the Manual for Erosion and Sediment Control in Georgia, Fifth Edition, 2000, and Forest Service engineering technical handbooks are sources for design specifications for erosion and sediment control measures.
8. Mitigation measures for the protection of soil and water, recreation, wildlife, and vegetation include directions and standards found in the Land Resource Management Plan for the Chattahoochee-Oconee National Forest, January 2004.
9. Riparian Corridors are designated on all perennial and intermittent streams in the vicinity as directed by Management Prescription 11 in the Forest Plan. The designation of these corridors identifies an area that will provide protection of streams and aquatic habitat.
10. Management of seasonal use periods of Rich Mountain Road will provide controls of potential damage to the road surface and adjacent slopes, but also provide vehicle access during hunting seasons or other designated periods of use.

11. Forest Supervisor Closure Orders will be developed to establish the seasonal and/or permanent closure status of individual road segments. Information will be provided to the public to make them aware of the current road status.
12. Law Enforcement presence on the area will be maintained to ensure compliance with the established closure orders.

Monitoring - Monitoring of implementation will involve contract inspections by certified contracting officer representatives to assure that the specified mitigation measures, best management practices, and contract specifications are appropriately utilized. Field reviews will be conducted by District and Forest-level staff to ensure that the appropriate standards and mitigation measures are implemented and that these measures are effective in protecting soil productivity, water quality, and other resources as they were designed to do. These practices also will be monitored after completion of the project to determine any maintenance needs. Specific water quality monitoring will be conducted to measure the effectiveness of the road reconstruction activities and mitigation measures. Baseline sampling of habitat conditions and aquatic invertebrate populations has already been conducted on selected stream segments.

Appendix D

List Of Preparers

Interdisciplinary Team

Name	Title	Unit
Jim Wentworth	Zone Wildlife Biologist / ID Team Leader	Brasstown
Dick Rightmyer	Forest Soil Scientist	Forest Supervisor's Office
Don Vaughters	Civil Engineer Technician	Toccoa Ranger District
Kerwin Dewberry	Supervisory Recreation Specialist	Toccoa Ranger District
Becky Bruce	Archeologist	Toccoa Ranger District
Gary Lawson	Law Enforcement Officer	Toccoa Ranger District
Wanda Millsaps	Office Service Assistant	Toccoa Ranger District
Deborah Byrd	Civil Engineer	Forest Supervisor's Office
Charlene Breeden	Forest Hydrologist	Forest Supervisor's Office

Appendix E

GLOSSARY

Acronyms

ATV – All-Terrain Vehicle
BE – Biological Evaluation
BMP – Best Management Practice
CWA – Clean Water Act
DN – Decision Notice
EA – Environmental Assessment
ESA – Endangered Species Act
FSM – Forest Service Manual
FONSI – Finding of No Significant Impact
FS – Forest Service
GADNR – Georgia Department of
Natural Resources
GFC – Georgia Forestry Commission
GNHP – Georgia Natural Heritage Program
HUC – Hydrologic Unit Code
ID Team – Interdisciplinary Team
LR – Locally Rare (species)
MA – Management Area
MIS – Management Indicator Species
NEPA – National Environment Policy Act
NF – National Forest
NFMA – National Forest Management Act
NFS – National Forest System
NHPA – National Historic Preservation Act
NRHP – National Register of Historic Places
OHV – Off-Highway Vehicle
ORV – Off-Road Vehicle
PETS – Proposed, Endangered, Threatened, and Sensitive (species)
RD – Ranger District

S&Gs – Standards and Guidelines
SHPO – State Historic Preservation Office
SMS – Scenery Management System
SMZ – Streamside Management Zone
T&E – Threatened and Endangered
TES – Threatened, Endangered, and Sensitive (species)
THPO – Tribal Historic Preservation Office
USDA – United States Department of Agriculture
USGS – United States Geological Survey
USFWS – United States Fish and
Wildlife Service
VQO – Visual Quality Objective
WMA – Wildlife Management Area

Definitions

A

Accessibility The relative ease or difficulty of getting from or to someplace, especially the ability of a site, facility or opportunity to be utilized by persons of varying physical and mental abilities.

Adverse effect – An action that has an apparent direct or indirect adverse effect on the conservation and recovery of a species listed as threatened or endangered. Such actions include, but are not limited to:

1. Any action that directly alters, modifies, or destroys critical or essential habitats or renders occupied habitat unsuitable for use by a listed species, or that otherwise affects its productivity, survival, or mortality. (FSM 2670.5)
2. Any action that directly results in the taking of a listed species. (FSM 2670.5)
3. Any action involving the disposal of land that is essential to achieving recovery objectives. (FSM 2670.5)

ATV- Any motorized, off-highway vehicle 50 inches or less in width, having a dry weight of 600 pounds or less that travels straddled by the operator. Low-pressure tires are 6 inches or more in width and designed for use on wheel rim diameters of 12 inches or less, utilizing an operating pressure of 10 pounds per square inch (psi) or less as recommended by the vehicle manufacturer.

B

Best management practices (BMPs) – Methods, measures, or practices to prevent or reduce water pollution, including, but not limited to:

1. Structural and nonstructural controls,
2. Operation and maintenance procedures, and
3. Other requirements and scheduling and distribution of activities.

Usually BMPs are applied as a system of practices rather than a single practice.

BMPs are selected on the basis of site-specific conditions that reflect natural background conditions and political, social, economic, and technical feasibility.

(Unified Federal Policy)

Biological Evaluation (BE) – A documented Forest Service review of its programs or activities in sufficient detail to determine how an action or proposed action may affect any proposed, endangered, threatened, or sensitive species. (FMS 2670.5)

C

Classified roads - Roads wholly or partially within or adjacent to National Forest System lands that are determined to be needed for long-term motor vehicle access, including State roads, county roads, privately owned roads, National Forest System roads, and other roads authorized by the Forest Service (*36 CFR 212.1*).

Cultural resources. *See Heritage resources.*

D

Decision Notice (DN) – A concise written record of a Responsible Official’s decision based on an environmental assessment and a find of no significant impact. (36CFR215.2)

Decommission – Activities that result in the stabilization and restoration of unneeded roads to a more natural state. (36 CFR 212.1), (FSM 7703)

E

Endangered species – Any species in danger of extinction throughout all or a significant portion of its range. This does not include a species of the Class Insects determined by the Secretary [of Interior] to be a pest whose protection under the provision of the Endangered Species Act [of 1973] would present an overwhelming and overriding risk to humans. (FSM 2670.5)

Environmental Analysis – The process required by the National Environmental Policy Act and Forest Service policy in looking at the effects of a decision before it is made and informing the public of them.

Environmental assessment (EA) – An EA is a concise public document that provides sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact. (36CFR215.2)

Erosion – The wearing away of the land surface by the action of wind, water, or gravity.

H

Heritage resources – Evidence of human behavior. They may be divided into four, often overlapping, data areas, which can be represented by the following disciplines:

- a. **Archeology.** That branch of anthropology, which studies the physical remains (artifacts) and other products and by-products of human behavior. (FSM 2361.05)
- b. **Architecture.** The art or science of building, including plan, design, construction, and decorative treatment. (FSM 2361.05)
- c. **Ethnology.** That branch of anthropology, which studies the behavior of living people. (FSM 2361.05)
- d. **History.** That disciplines which studies the human past through the analysis of written documents. (FSM 2361.05)

Historical resource – Any structural, architectural, archaeological, artifactual, or other material remains of past human life or activities that are of historical interest and are at least 50 years of age, and the physical site, location, or context in which they are found. (36CFR261.2)

Horizon (soil) – A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. The **A-horizon** is the mineral

horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material.

Hydrologic Unit Code (HUC) – A watershed of a specific scale used by multiple agencies to organize and catalogue hydrologic data.

I

Interdisciplinary Team (ID Team) – Consists of persons with different professional backgrounds useful in preparing an environmental analysis.

L

Land and Resource Management Plan (Forest Plan) – A plan developed to meet the requirements of the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended (95–125, 129, 130). This plan guides all natural resource management activities, and establishes management activities, standards, and guidelines for each national forest.

M

Management indicators – Plant and animal species, communities, or special habitats selected for emphasis in planning, and which are monitored during forest plan implementation in order to assess the effects of management activities on their populations and the populations of other species with similar habitat needs which they may represent (FSM 2620.5.1).

Management indicator species (MIS) – Any species, group of species, or species habitat element selected to focus management attention for the purpose of resource production, population recovery, maintenance of population viability, or ecosystem diversity (FSM 2605).

Mitigation – An action taken during a projects implementation to lessen adverse impacts or enhance beneficial effects. These measures may take place before, during, or after implementation of the project.

Motorized Equipment- Machines that use a motor, engine, or other non-living power source. This includes but is not limited to such machines as chain saws, aircraft, snowmobiles, generators, motorboats, and motor vehicles. It does not include small battery or gas powered hand carried devices such as shavers, wristwatches, flashlights, cameras, stoves, or other similar small equipment.

N

National Environmental Policy Act (NEPA) of 1969 – Declares that it is the policy of the Federal Government to preserve important historic, cultural, and natural aspects of our national heritage, the National Environmental Policy Act (NEPA) directs that, to the fullest extent possible . . . the policies, regulations and public laws to the United States shall be interpreted and administered in accordance with the policies set forth

in this act. Compliance with NEPA, therefore, includes a demonstration of compliance during project planning and execution with other measures for the protection of environmental values. (FSM 2361.01)

National Forest Management Act (NFMA) – A law passed in 1976 amending the Forest and Rangeland Renewable Resources Planning Act that requires the preparation of Regional and Forest plans and the preparation of regulations to guide development of these plans.

National Forest System – All national forest lands and waters reserved or withdrawn from public domain of the United States; national forest lands and waters acquired through purchase, exchange, donation, or other means; national grasslands and land utilization projects and waters administered under title III of the Bankhead–Jones Farm Tenant Act (50 Stat. 525, 7 U.S.C. 1010–1012), and other lands, waters, or interests therein acquired under the Wild and Scenic River Act (16 U.S.C. 1271–1287) or National Trails System Act (16 U.S.C. 1241–1249). (36CFR261.2)

National Register of Historic Places- The National Register of Historic Places is the Nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The National Park Service administers the National Register, which is part of the U.S. Department of the Interior

National Register of Historic Places -A listing of areas maintained by the U.S. National Park Service of areas that have been designated as being of historical significance, including places of local and state significance as well as those of value to the Nation.

O

Off-Highway Vehicle (OHV)-Any vehicle capable of being operated off established roads; e.g., motorbikes, four-wheel drives, and snowmobiles. (Also referred to as OHV or off-highway vehicle)

Off-Road Vehicle (ORV) -Any motorized vehicle designed for or capable of cross county travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain; except that term excludes (A) any registered motorboat, (B) any fire, military, emergency or law enforcement vehicle when used for emergency purposes, and any combat or combat support vehicle\when used for national defense purposes, and (C) any vehicle whose use is expressly authorized by the respective agency head under a permit, lease, license, or contract.

Overstory – The uppermost canopy in a forest with more than one layer. (SAA)

P

- PETS** – An acronym for species proposed for listing, or already listed, as [proposed], endangered, threatened, or sensitive pursuant to the Endangered Species Act. (SAA)
- Prescribed fire** – The application of fire, usually under existing stands and under specified conditions of weather and fuel moisture, in order to attain silvicultural or other management objectives. (SAF)
- Proposed species** – Any species of fish, wildlife, or plant that is proposed by the [U.S.] Fish and Wildlife Service or National Marine Fisheries Service to be listed as threatened or endangered. (FSM 2670.5)

R

Recreation Opportunity Spectrum (ROS)

A method for classifying types of recreation experiences available or for specifying recreation experience objectives desired in certain areas. Classes are: Primitive, Semi-Primitive Non-Motorized, Semi-Primitive Motorized, Roded Natural, Rural, and Urban.

Primitive ROS - An area characterized by having essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted.

The recreation experience opportunity level provided would be characterized by the extremely high probability of experiencing isolation from the sights and sounds of humans, independence, and closeness to nature, tranquility, and self-reliance through the application of woodsmen and outdoor skills in an environment that offers a high degree of challenge and risk.

Semi-Primitive Non-Motorized (ROS) - An area characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users (or concentration of users) is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present but are subtle.

The recreation experience opportunity level provided would be characterized by the high, but not extremely high (or moderate) probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through the application of woodsmen and outdoor skills in an environment that offers challenge and risk. (The opportunity to have a high degree of interaction with the natural environment.) Motorized use is not permitted.

Semi-Primitive Motorized (ROS) - An area characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users (or concentration of users) is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present but are subtle.

The recreation experience opportunity level provided would be characterized by the high, but not extremely high (or moderate) probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through the application of woodsman and outdoor skills in an environment that offers challenge and risk. (The opportunity to have a high degree of interaction with the natural environment.) Motorized use is permitted.

Roaded Natural (ROS) - An area characterized by predominantly natural-appearing environments with moderate evidences of the sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities.

The recreation opportunity experience level provided would be characterized by the probability for equal experiencing of affiliation with individuals and groups and for isolation from sights and sounds of humans. Opportunities for both motorized and non-motorized forms of recreation may be provided.

Rehabilitate – The process of restoring or returning a site, such as a skid road, to a condition that existed prior to the disturbance, or returning that site to a condition that is not contributing to further environmental deterioration and that is consistent with the aesthetic values of the site.

Riparian areas – Geographically delineable areas with distinctive resource values and characteristics that are comprised to the aquatic and riparian ecosystems. (FSM 2526)

Riparian habitat – Habitat that is related to and influenced by surface or subsurface waters, especially the margins of streams, lakes, ponds, wetlands, seeps, and ditches. Riparian habitat refers to the transition zone between aquatic and upland habitat. (FSM 2605)

Road closure - A technique used by management to regulate and control the use of facilities to achieve transportation economy, user safety, protection of the public investment, and accomplishment of forest resource objectives. Closure may be intermittent or long term.

Road maintenance levels - A formally established set of objectives, which describes the conditions necessary to achieve the planned operation of a road. The levels vary from Level I, basic custodial care, to Level V as described below:

Level 1 – Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period must exceed one year. Basic custodial

maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities and runoff patterns.

Roads receiving level 1 maintenance may be of any type, class, or construction standard, and may be managed at any other maintenance level during the time they are open to traffic. However, while being maintained at level 1, they are closed to traffic, but may be open and suitable for nonmotorized uses.

Level 2 – Assigned to roads open for use by high clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or other specialized uses. Log haul may occur at this level.

Level 3 – Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities.

Roads in this maintenance level are typically low speed, single lane with turnouts and spot surfacing. Some roads may be fully surfaced with either native or processed materials.

Level 4 – Assigned to roads that provide a moderate degree of user comfort and convenience at moderate traffic speeds. Most roads are double lane and aggregate surfaced. However, some roads may be single lane. Some roads may be paved and/or dust abated.

Level 5 – Assigned to roads that provide a high degree of user comfort and convenience. These roads are normally double lane, paved facilities. Some may be aggregate surfaced and dust abated.

Roaded Natural 2 – This is a sub-classification of Roaded Natural that accounts for areas on the National Forest that adjoin **SPNM** areas or stand alone as areas of 1500 acres or larger with combined open road density and motorized trail density of 1.5 miles per 1000 acres or less. Areas managed as RN2 are maintained to conserve their relative remoteness.

Road obliteration – Removal of FS systems road from the NFs transportation network with no plans for future road maintenance or reconstruction. Typically, road obliteration embodies terminating the physical function of the road as well as implementing a remedy for environmental problems (RAP). Decommissioning includes various levels of treatments to stabilize and rehabilitate unneeded roads such as blocking the entrance, revegetation, and water barring, removing fills and culverts, re-establishing drainage-ways, and removing unstable road shoulders, or full obliteration by recontouring and restoring natural slopes (Definition from Forest RAP and Forest Plan DEIS)

S

Scoping – The process of deciding what should be considered in an environmental analysis. Scoping includes, but is not limited to, public involvement.

Sediment – Soil particles that have been detached and transported into water during erosion.

Sensitive species – Those plant and animal species identified by a Regional Forester for which population viability is a concern, as evidenced by:

1. Significant current or predicted downward trends in population numbers or density. (FSM 2670.5)
2. Significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution. (FSM 2670.5)

Short-term effects – Those effects that will usually occur within the next ten years.

Snag – A standing dead tree used by wildlife for nesting, roosting, perching, and food gathering.

State-Licensed Vehicles – Vehicles licensed by the State for highway use. This includes vehicles such as 4-wheel drive pick-ups, SUV's, motorcycles, and passenger cars.

Streamside Management Zone (SMZ) – A designated area of varying width adjacent to the banks of streams and bodies of water where management practices that might affect water quality, fish, or other aquatic resources are modified.

T

Threatened species – Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range and that appropriate Secretary has designated as a threatened species. (Some States also have declared certain species as threatened through their regulations or statutes.) (FSM 2670.5)

U

Unclassified roads - Roads on National Forest System lands that are not managed as part of the forest transportation system, such as unplanned roads, abandoned travel ways, and off-road vehicle tracks that have not been designated and managed as a trail; and those roads that were once under permit or other authorization and were not decommissioned upon the termination of the authorization (*36 CFR 212.1*).

V

Visual quality objective (VQO) – A set of manageable goals for the management of forest visual resources, and a desired level of excellence based on physical and sociological characteristics of an area. It refers to degree of acceptable alteration of the characteristic landscape. Each VQO is associated with a set of mitigation measures designed to minimize the impact of management activities on the visual resource.

W

Wilderness A Congressionally-designated area that is part of the National Wilderness Preservation System established through Wilderness Act of 1964; Also defined in the Act as a wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this chapter an area of underdeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

Wildlife Management Area (WMA) – Area of the forest for which the Forest Service and the Division of Wildlife Resources of the Georgia Department of Natural Resources have a written agreement about the management of wildlife and their habitat.

Appendix F

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